

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Nepal is a small mountainous country which has an area of 147181 sq km. It is located between 26⁰ 22'N and 30⁰ 27'N latitude and 80⁰ 4'E and 88⁰ 12'E longitude. It has great diversity in landforms. The altitude of the country ranges from 60m to 8848m from sea level. It is divided into three ecological zones namely Mountain, Hill and Terai region. 50% of the total land is covered by hills and 25% by each of the mountain and Terai.

Nepal is a developing country having the per capita income Rs1209 (Ministry of Finance, 1996). Our economy is mainly based on agriculture and most part of our GDP 41.4% is generated from agriculture sector. But the growth rate of agriculture is very low that is only 3.2%. It proves that depending upon agriculture is not lucrative work. To modernize agriculture is very hard task in our situation and we have industrial sector which has 11.9% annual growth rate.

Industrialization plays a vital role in the economic development of the country all over the world. Without, industrialization economic development is very hard. Thus almost all countries are trying their best for the improvement of their economic development through industrial progress. Industrialization is one of the most important tools for the increment of living standard of people and their countries. But our economic condition is different. Our economy has very low level of infrastructure. Hence we can't establish the large scale industries promptly without improving the level of infrastructure. In this situation we can establish and operate small and cottage industries so that they may fulfill our limited expectation from industry and they may also fulfill the limited requirement of local people. A part from this, these industries provide the family employment and income.

We can transfer the surplus labor to the industrial sector from agriculture sector. So the alternate is small and cottage industries and pottery industry is one among various such industries. Such industries are spread in various parts of Nepal. All people use the pots. It has supported economy by helping to substitute the import

of metal vessels and giving employment to the unemployed family. In our country, pottery industry is operated in various places and Bhaktapur is the specialized place since long time.

Nepal is a country inhabited by distinguished ethnic groups, speaking different languages, holding different faiths and having different occupations. Still there is a strong bond of unity among these ethnic groups living together by a strong feeling of nationalism. Nepal has a various climatic condition right from the very hot climatic condition of Terai plains of south to the arid, dry and very cold climatic condition of Himalayan region. Thus the climate and the topography of the country have made it necessary for the people living in different part of Nepal to adapt different ways of life such as farming, carpenter, trading, pottering etc.

The clay pots made in Nepal are varied by shape and size according to the topographical and climatic conditions. Size and shape of clay pots are considerably changing in the course of time. In the beginning man started his life in the jungle without any materials. They slowly came to know the usages of clay pots. These pots became very useful to them. The primitive men used clay pots in cooking and eating food and carrying water and storing different food grains. They used pots to decorate rooms, kitchens, gardens etc. They decorated their pots by tattooing and painting. After some time, they learnt to make advanced types of pots with their knowledge and skill. Realizing usages and importance of clay pots they started to modernize the size and shape of clay pots. Thus it can be said that clay pots are not only decorative impulses but they are very useful thing too. Internal features of clay pots differ from one race or tribe to other race or tribe.

1.2 Statement of the Problem

Nepal is called one of the poorest countries of the world. According to the national statistics, 42.5% people are below absolute poverty line (census 1991). There are so many problems associated with it. According to the Plato (Greek philosopher) “there is justice in the society when all do their proper work, when no talent is wasted or misused”. And unemployment is main problem of our country. In other hand, universities of the world produce in innumerable number of educated unemployed people every year. Government is not capable to provide jobs for all. In such conditions, one alternative way of earning the living is agriculture. However

because of growing population, the agricultural lands are also diminishing day by day, because of huge residential area cover the fertile lands. Therefore in near future, people will reach in the condition of without agricultural land. Therefore people have to shift their job to the industrial development. However the people of all parts of world are not efficient to establish the large scale industries due to their economic condition. Especially, people in the developing countries like Nepal are very poor economically. In such countries, the cottage and small scale industries are very important because in such industry, small capital investment is enough. Among many cottage and small scale industries, the pottery industry is also the most important.

Cottage and small scale industry is very important for developing countries because small capital investment is enough. Nepal is a developing country. Large industries which needed large capital are impossible to establish for the economic development of the country. More priority should be given to cottage and small scale industries. Among the cottage and small scale industries, pottery industry is also the most important one.

Pottery industry produce different kinds of pottery goods which are useful in domestic purposes and to decorate hotels, office etc. People in Bhaktapur only use clay pots. Their technology is simple but items they produce are more expensive. From the tourist's point of view, it might be a good market for foreigners.

Nowadays, pottery goods are being substituted by plastic, glass and metal goods. Plastic good has replaced their pottery goods as they are lighter with good finishing. Metal vessels are very stronger and more standard than the clay pots. Clay pots are unable to compete with the metal vessels. Similarly, the glass vessels are good looking, therefore are not able to compete to these vessels too. This is one of the challenge for the potters of Madhyapur Thimi.

The main target of the present study is to find out the facts about the pottery industry in Madhyapur Thimi. According to the local potters, there were no substitution for the pottery vessels and they could get the clay needed for the industry very easily without any cost. However the situation has changed over time and has been difficult to get the clay. They must pay for it as well as for the

transportation too. So the pottery goods produced are more expensive than the other vessels.

Further more, there are many substitutions for the pottery vessels. But there is no substitution for “Gamala” the pottery vessel used for flowering. So most of the potters produce “Gamala” at maximum in Madhyapur Thimi than other pottery goods. The Prajapatis of Chapacho has considered the pottery production as the primary occupation but some has considered it as secondary work. Those who consider it primary occupation fulfill all their expenses through this work. But the condition is not same in those who consider it as secondary. They just fulfill their basic needs through the income earned through this. And the other needs are fulfilled through other source of income. According to the old potter there wasn't system of giving education to their children but at recent period the system doesn't prevail. According to him due to illiteracy he is forced to be involved in this occupation. But today's young generation don't show any interest in this work. They are shifted to the other alternatives.

The pottery making is totally a hand work in the past. But due to the development new system and technology, the pottery making task has been easier and more production is done in less time.

The Prajapatis who consider it as their secondary occupation don't possess the moulding machine due to lack of money. However moulding machine is found in those Prajapati houses whose primary occupation is found to be pottery making. Moulding machine is of utmost necessity for the speedy work. Those who doesn't possess bring it in rent paying Rs30 per hour. Sometimes they have to stay in a long queue for the machine due to which they can't perform the task in time. The process of using the wheel in past is quite different as compared to the recent period. The wheel is regulated with the help of electricity at present. So work has been more easier and convenient. However, the young people aren't interested to adopt this work. But they have shown their interest in ceramic production as it is the modern form of local production. Today no work (from bringing clay to different processes) is dependent on hand. Firing system is quite similar in local production as well as ceramic production. The difference is just the materials used for firing. In ceramic production kerosene, electricity is used whereas in local, straw chawali etc are used.

At recent time, on one hand the young people don't show interest in the work and on the other hand so many alternatives of pottery vessels have been developed. Due to this its demand in the market has been decreased and its use has also been reduced. The plastic, glass and metal vessels have substituted the pottery vessels. However the flower pots (name Gamala) have been used at present time too in large amount as there are no other substitutions for this. So the production of Gamala is found to be maximum in this area. Due to the modernization, only the elder people are seen to be involved in this occupation. The new generation is not seen to adopt this occupation.

So the present study mainly focus on how many years have they adopted this occupation, how indigenous pottery is affected by modern utensils, why young generation don't want to keep up their traditional occupation, what are the main process of pottery making, what types of pottery goods are produced, and what is the socio-economic status of potters and what are the main problems.

1.3 Objectives of the Study

The main objectives of the present research are to explain the situation of pottery industry of the study area i.e. Madhyapur Thimi.

The followings are the specific objectives of the study.

- a. To study socio-economic status of potters,
- b. To examine the process of producing the major pottery goods and their marketing,
- c. To find out the working pattern and marketing of pottery industry,
- d. To find out the major problems of the pottery industry.

1.4 Limitation of the Study

1. The study is limited in only Chapacho (ward no. 8 and 10) of Madhyapur Thimi,
2. The study is limited to the certain objectives,
3. It is the individual study,

4. The present research is only on the Prajapatis who are involved in this production at recent time,
5. There are many people of different caste in Chapacho. But the present study is limited to only Newar Prajapati who has been considered to be responsible for this production by their tradition,
6. Due to the limited time and financial constraints the study couldn't cover the whole area and not even the whole households. Hence the study has been completed while surveying with 31 households out of 310 households.

1.5 Significance of the Study

Pottery industry is also an important industry among the various cottage and small scale industries. It is important in many ways. It provides employment to local people who are not educated. On the other hand, it provides goods which are cheaper than other metal, glass and plastic vessels. Similarly this study has tried to explain the fact that most of the ceramic production are exported in foreign countries which has helped to increase the national income. These goods are further used in hotels and restaurants as decorative materials. Further from this study historians can identify the period of sculptures, change in the clay pots, and the instruments used in the industry. Again when this research book will be published it will be an interesting book for tourists as well as others to know about the traditional pottery industry and its products. At last but not least this study will be helpful for the students who want to make study on pottery industry of Chapacho and other places. This study will try to understand and be familiar with the pottery industry, potters and their history. The socio-economic status of potters will be known which helps in estimating the overall status of Nepalese people. Nepal is a poor country. Large industries which need large capital are quite impossible to establish. So for the economic development of the country more priority should be given to cottage industries. And pottery industry, of course, will help to uplift the economic condition. So familiarity with this industry is of utmost necessity which will be gained by this study.

Further this study will help in finding out the problems relating to this industry and help us in exploring the methods to solve the problems which will lead to the upliftment of this industry. Knowledge gained from this study will help to establish more and more pottery industry and unemployment problem of the country will be solved to great extent.

CHAPTER - II

LITERATURE REVIEW

The pottery industry is one of the oldest industry in the world. It may have started from the beginning of the human civilization, when man feel the need of such vessels. In the past people use this vessel for all purpose such as cooking, drinking, storing, eating etc. At that time, there were not other vessels to substitute the pottery vessels. In fact the clay pots were inseparable part of the daily life to human being. The human beings can do nothing without pottery vessels. Pottery vessels are most important for people. Therefore we can find many literatures in this field.

The first book about ceramic in Nepali language is “Mritika Uddyogoko Ruprekha” was written by Karunakar Vaidya. This work is published by Madan Puraskar Guthi in 2015 B.S. he focus mainly on the historical development and importance of ceramics. It was concerned with ceramic chemistry. In this book regarding techniques of pottery production and use of different chemicals in pottery arts are described. The author has given detail information about raw materials, processing, firing techniques, glazing techniques, processing of goods etc.

Maiya and Devi (1981) have studied on pottery making industry in Bhaktapur. The general objectives of this study are to find out the total employment provided by this industry, to find out the functioning of this industry and its marketing, to study technology used in this industry, to find out problem of it and to study the support given by it to the economy of the town of Bhaktapur.

Kusma (2004) has studied on socio-economic status of the Kumal: A Case Study of Kumal (Prajapati)of Pottery square, Bhaktapur. The general objectives of the study are to analyze the social status of kumal people, to explore the ultural status of kumal and to find out economic status of kumal.

Sakha (1983) has studied on “Pottery Industry:A Case Study of Bhaktapur Town Panchayat”. The objectives of her study are to examine the production and marketing of pottery production in Bhaktapur Town Panchayat, to portray the existing situation of the pottery industry in Bhaktapur Town Panchayat, to indentify

the problems and to suggest appropriate measures for improving the state of pottery units in Bhaktapur Town Panchayat.

Khanal (1999) has studied on Pottery Industry in Nepal: A Case Study of Bhaktapur district. The general objectives of the study are to find out the production of pottery, to analyze the marketing area of pottery production, to find the number of employed person in pottery industry and to analyze the problem of pottery and suggest the recommendation to improve in Bhaktapur.

Sapkota 1994 has studied on “Market Survey of Ceramic Production in Kathmandu”. The general objectives of the study are to find out the share of local and imported goods, to find out the problems of producer and to recommend ceramic project promotion (CPP) and to take precaution .

Sapkota (1998) has studied on “An Ethno Sociological Study of the potter: A case study from Bolanchhe Tole, Bhaktapur”. The general objectives of the study are to trace out the culture and history of the potters of the study area, to study the status of potter in Newar caste structure, to find the attitudes of the potters towards pottery and to examine the rule of pottery in the economy of the potters.

Regmi (2000) has studied on “Impact of Modernisation on occupational caste group: A case study of the Prajapati (the potters) of the Madhyapur Thimi Municipality, Bhaktapur”. The general objectives of the study are to study the status of the potters in the Newar caste structure, to describe the subsistence related socio-economic and cultural activities of the Prajapati of Thimi in the local environment, to find out the attitude of new government toward pottery and to find out impact of modernization in indigenous pottery industry and occupational crisis.

J. Danish (1990) has studied on District survey of traditional potters. He focuses mainly on number of potters, their condition and involvement of Tharu in pottery industry. And analyzed the market of local and indigenous goods and found that pottery industry is competing with Indian goods. He had also suggested that government should support and should give incentives to potters.

Prajapati (2005) has studied on “Pottery Industry in Bhaktapur: A Case Study of Bhaktapur Municipality. The general objectives of the study is to find out the socio- economic status of the pottery area , to analyze the major goods, to find the present situation of production and market of pottery goods and to explore the main problems of pottery industry of the study area.

Manandhar (2003) has conducted his study on “Potteries As An Urban Economic Base of Madhyapur Thimi Municipality”. The general objectives of the study are to study urban economic base of Madhyapur Thimi Municipality with respect to the role of potteries and ceramics, to study the local economic development (LED) policies and to make recommendations for local government and other line agencies.

Maharjan (1990) has studied on “A Base Study Regarding Pottery Production in Surkhet District”.His study is mainly based on the Tharu community. This discriptive type of study describes that products have fulfilled the household necessities, high cost of product because of high demand and low supply, Tharu being suppressed caste exist largely outside cash economy, necessity of health education and necessity of assisting them.

Besides these, we can find many reports on the literature of pottery. Some reports on 1990, 1992, 1994 are published by ceramic promotion project. Among them some are training reports and some are project evaluation. They are not study work. They are explained only for general information in this works. They are as follows-

1. Report on Janakpur Ceramic Training Program of CPP (1990). This work is not research but only the report of training program.
2. Progress Report of CPP (1992)-this is the progress report about CPP. This report has concluded that the progress on the project is positive. This has analyzed the input and output condition.

3. B.C Vaidya, revised plan of operation (1994). This is about project evaluation but not detail study. This has also analyzed the input and output condition of project(CPP)
4. Market assessment of some ceramic product in Nepal (CPP1993). This is about the price of pottery. This is not research but study without price situation. This study has examined the price of some selected goods from some selected places and found that there is higher margin in the business of pottery goods.

In this way, we can find the many literatures about pottery industry. All of these have helped to conduct the present study.

CHAPTER - III

METHODOLOGY

3.1. The Selection of Study Area

The present study primarily focus on the livelihood pattern of Prajapati of pottery industry. For this study Chapacho VDC of Madhyapur Thimi of Bhaktapur district have the concentration of pottery industry like Bhaktapur Municipality and Madhyapur Thimi(Balkumari and Chapacho). Madhyapur Thimi is a municipality town of Bhaktapur District. It was constituted by a combination of the village development committee and they are Balkumari, Chapacho, Bode, Nagadesh and Lokanthali. It consists of 11.7 sq km area. It is located at the altitude of 1326 m from sea level. It lies 8 km east from Kathmandu and 4.5 km west of Bhaktapur. Geographically, Thimi lies within 85 27E to 85 30 E longitude and 27 36'N latitude. It almost looks like tongue. Chapacho VDC of Madhyapur Thimi Municipality of Bhaktapur is familiar, well known and easily accessible to the researcher. The researcher has visited the area so often and being a major concentrated area of pottery production,this is selected as the study area.

Accessibility

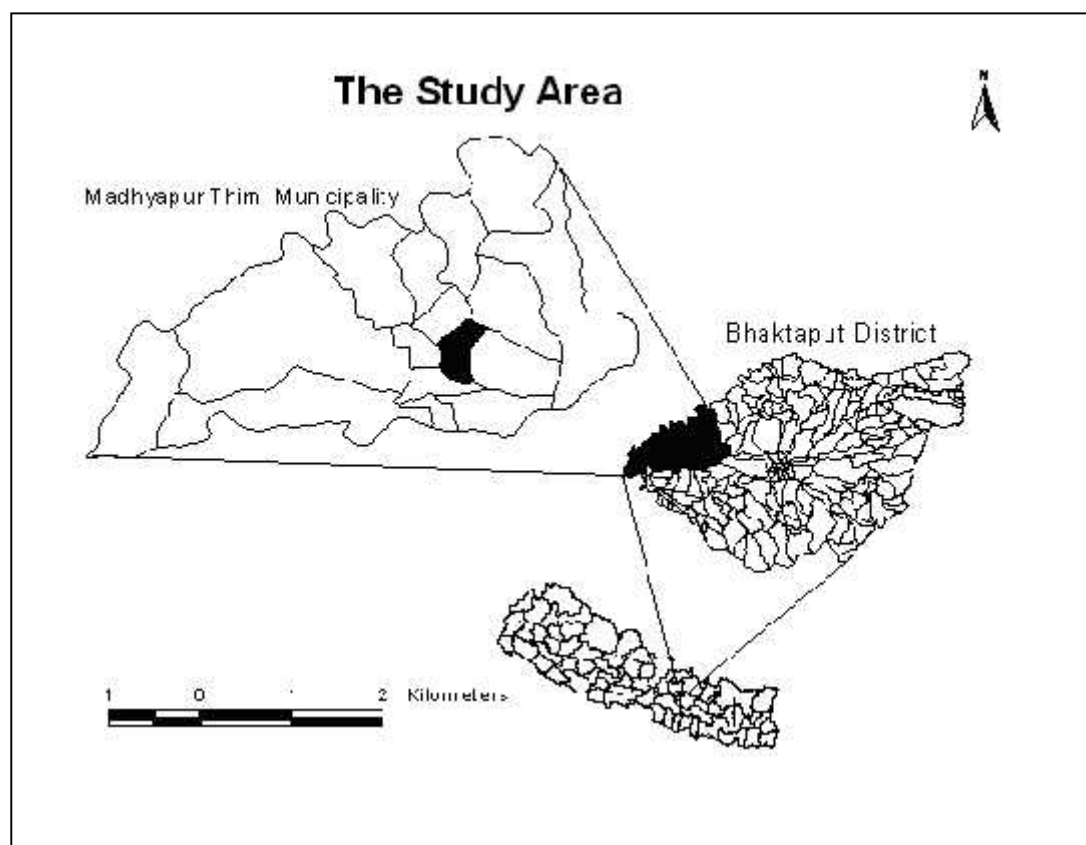
Madhyapur Thimi municipality is formed by merging 5 VDCs namely Balkumari, Chhapacho, Thimi, Bode and Nagadesh. Each of them was previously divided into 9 wards. The number of wards are now 17 after forming this municipality. The ward boundary of Thimi lies in between the new road which is called China road and old road to Bhaktapur. It is 8km east from Kathmandu. If one has to go from Kathmandu, there are two ways to reach there via Naya Thimi and another via Bakha Bazar. It is about 10 minutes walk to the north from the Naya Thimi which is situated on the road of Arniko highway. There are regular bus services available to Naya Thimi. There is also trolley bus service available to Naya Thimi from Tripureshwor, Kathmandu.

River System

One small stream named the Manohara Khola lies at the Northern part and to the Southern side of the municipality there is Hanumante river which drains nearly 80% of the municipal area. Most of the small streams draining to river Manohara and Hanumante across Madhyapur Thimi are seasonal streams and remain dry for most of the year.

In general, river water quality is fair to good in the recent year, however the surface of water's quality as well as the discharge of the river is declining because of increasing water usage by the sprawling settlements in the head water of Manohara. River Hanumante on the other hand is excessively polluted due to discharge of untreated households sewage from Bhaktapur urban center. The water is no longer fit for recreational activity, fresh water biology and even for irrigation.

3.1.1 Location map of the Study Area



3.2 Sample Size

This study was conducted in purposively selected two wards in Chapachho of Madhyapur Thimi municipality of Bhaktapur district. At first all households were

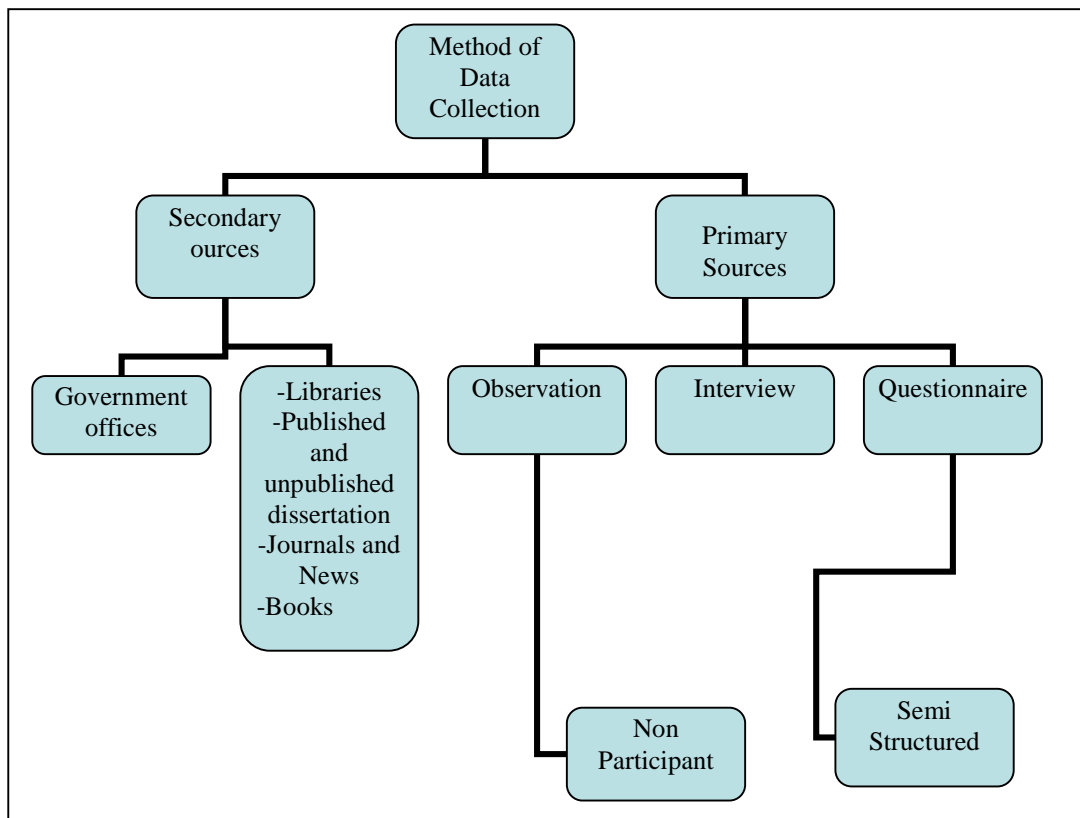
collected. There are all total 310 potters' family. Then the sample of 10% families of potters i.e. 31 families are taken.

3.3 Methods and Sources of Data

Both types of data namely the primary and secondary data are used. The primary data are collected by using structured questionnaire from the field survey, personal interview with the key person, by observation of the pottery areas. And the secondary data are also used for the present study. The sources of secondary data are different institutions like Nepal ceramics co-operative society Ltd, Municipality office, and various research and project report

Figure No.1

Methological Framework of Data Collection



3.3.1 Primary Data

The present study is basically based on the primary information . Primary data were collected through field survey in Chapacho from 17th November to 26th November 2007.

After selecting the desired sample size primary data has been collected with following mentioned methods. Before going to the field a set of structured questionnaire was prepared. Then after correcting it once it was filled by the researcher later on in the field while interviewing with the selected sample households. Besides the structured questionnaire the observation method was also included and the findings or information was recorded in the field notes

3.3.1.1 Questionnaire

The household survey was conducted to collect information about the socio-economic status of potters, production situation, production process etc. Such data were collected by using a structured questionnaire. The questionnaire was prepared in English language and it was translated in their own language at that time of interview. The field survey was conducted from 17th November to 26th November in 2007.

3.3.1.2 Field Observation

Field observation was also conducted to study the types of pottery vessels and pottery area. All kinds of pottery vessels are not produced from all pottery areas. For example the potters of Nasanani Tol produce mostly “Gamala”. By observation the difference between the pottery production process among traditional and modern potters has been known.

3.3.1.3 Interview with the Key Informants

For the collection of more information about the pottery area, interview with the key persons was also conducted. For this purpose, it was contacted with the intellectual persons such as teachers, social workers, political leaders, authorized persons of different offices from where the reliable data can be collected.

3.3.1.4 Non Participant Observation

The non participant observation in which the researcher does not participate in the group but only adopted the non participant observation to get information about their working pattern, behaviour among the potters daily life style and habits which are very important for meaningful interpretation about socio economic condition, process of production of major goods and marketing.

3.3.1.5 Taking Photographs

To make any study successful and meaningful it is important to have some proofs which can assist to answer questions raised by any person. And no doubt photographs are the most relevant one. So photographs have been taken for identification of things and processes.

3.3.1.6 Field Notes

A field notes was also maintained. During field survey information which were important and were not included in the questionnaire were recorded in the field note. Even views and information given by the respondent were also use to keep in the field notes. It has also recorded field experiences as well.

3.3.2 Secondary Data

For the secondary information different sources like government offices and libraries has been used. Relevat literatures of the university, Central Department of Geography, different bulletin, monthly digest, newspaper from government and non government offices like Nepal Ceramics Cooperative Society, Swavalamba Samuha have also been used for required information.

3.4. Data Analysis

After collection of data by using different methods as mentioned above, the raw data edited properly and later on it was organized in the form of tables. However, after completing the tabulation part the data was then analyzed using appropriate statistical tools such as percentage and mean. In addition cartography tools are also used to present the information and finding of the study.

CHAPTER - IV

HISTORY OF POTTERY INDUSTRY

4.1 Origin and Oral History of Potters

The word “Prajapati” is comprised of two words. Praja means people and pati means lord. In this way Prajapati literally means the lord of the people but the Prajapati do have concepts of their surname associated with Lord Brahma and Bishwokarma (the creators of all the living beings and that of all the non living things respectively according to Hindu Mythology). Most of the Prajapatis said that they are the creators of things. They are also like Bishwokarma because they produced all the necessary things for the living creature. So that the potters (specially of Bhaktapur) do not eat the meat of the duck. Duck is the vehicle of the Lord Brahma. The another cause is that duck is their teacher. It is said that once a potter was firing the pots, most of the pots were broken, he became sad. At the same time a duck came there and cried (Fiti-fiti) i.e. put sand in their own language. Then after the potter mixed sand in clay and made pottery. The result was that there was no more breaking of vessels. This way some potters thought that duck is their teacher. Therefore from that time the potter mix sand in the clay for the durability of potteries but nowadays most of the potters do not mix sand. In the beginning, some potters might have written the surname Prajapati and later most of them accepted their surname. Even today there are many potters belonging to the Newar caste group surnamed as Prajapati.

The potters of Nepal are supposed to have relationship with the potters of India. The hypothesis has sufficient points to prove it that the Newar are also supposed to have migrated from India a long years ago. They are even linked with the Nayars of South India. As the potters of Thimi themselves belong to Newar caste, they might have been migrated from India as other Newars. But there is no any strong evidence to support the argument.

But surprisingly the potters belonging to the Tharu caste groups of inner Terai and other potters' groups in Nepal do not call them Prajapati. Whatever other caste may call themselves but the Tharu potters should have their surname Prajapati because they are comparatively in close contact with the Indian due to geographical

nearness as they live in the Southern Terai and the Tharu have a lot of cultural similarities with the Indians.

Prajapati are of the sub caste group of the Newars. The potters are adopting pottery as a means of subsistence. It is said that all the Prajapatis were potters in the beginning but in course of time occupational shifting has occurred. However, the Prajapati is who shifted the occupation are not distinct to the potters. They both are culturally the same. This way by Prajapati we simply means the potters obviously belong to the Prajapati but it is to be noted that all the potters in Newar caste group are Prajapati but the Prajapati in the present context does not necessarily mean all the potters

The Newars are supposed to have been settled in the valley since pre-historic time. As the Prajapatis belong to the Newar themselves, they are also supposed to be existed in the valley since the prehistoric time, but there is no such strong evidence to support the origin of the potters. Some of the scholars have the concept that the potters were migrated from India as the potters as they were there. But many of them are against it. According to them the potters were certainly migrated from India but they were not classified as potters when they approached to valley. A great historian Babu Ram Archarya (cited by sakha) opines that the potters of valley have migrated to the valley long ago from the Southern belt of Nepal. They were the Tharus of inner Terai. Some of the local Prajapatis too think that their ancestors were brought to the valley from the Terai in order to make cooking vessels. Since then they have inhabited in Bhaktapur making potteries for their livelihood, Dr. Chudamani Bandlua(cited in Manandhar) denies him with the antagonistic view that the Newar potters of valley are totally different from the Tharu potters of Terai in all respects. He argues if the both (Newar potters and the Tharu potters) had been from the same origin, at least they should have had dialectic similarity. But all the potters of the valley share the same Newari dialects, which does not resemble that of the Tharu language in any respect. Newari language comes under Tibeto-Burman Family while Tharu language relates with Indo-European family.(Regmi Mithu, 2000)

4.2 Historical Background of Pottery Production

Pottery is a part of ceramics. The word 'ceramics' is derived by the Unani word 'keramics'. In German, it is called 'keramic'. All these words give the

meaning that the science about soil-craft. This (ceramics) is the very old industry. Egyptians were the first users of the pots. Pieces of brick found in the side of Nile river are estimated 10,000 years old. Singh Guru(1979) States “Brahma created man out of clay as a potter creates so many pots and toys out of it. Hence the name Prajapati is given in India”. “The making of pottery and the use of the pottery wheel came after experience had been gained in use of clay for brick making. There is another proof about the beginning date of ceramic product statement stated by the same author is “ a brick has been carbon-14 dated at 9000-10000 years old....”Namio Egmi supports the same view stating that “the date of Archaic Joman pots is estimated as around 7000 B.C”. After beginning the pottery industry, it played the important role in human civilization. Generally the earthen-ware-pots were produced for practical purposes as vessel for holding and storing for boiling and cooking. This industry was spread with and after industrial revolution in Europe. Then the pottery vessels began to reach the Western market in the 1880’s. “the fragments of pottery in Egypt are estimated to be more than 13000 years before. These all facts prove that the pottery is the first industry which was started with the starting of human civilization. When people feel the necessity of use of pots they started to make vessels according to their tradition. This process was continued and developed for a long period of time.

When modern age started Japan, Germany, China and Islamic countries had contributed to the development of pottery. It has been modernized according to development of time.

4.3 History of Pottery Production in Nepal

Our country is not only the agro based but also the important place of cottage and small industry. Hence the craft of soil is very old. The use of oil brick (Telia int) in temple is the example to prove this view. The Maha Baudha temple in Patan was the first evidence (1650B.S) of pottery craft in Nepal. In Hanarjung VDC in Terathum, the pieces of pots are available and they are estimated very old. The local people say that these pots were used by “Nagas” a few thousand years ago. In Veda, soil-pot is explained as “Mritika Ghata.” When the population grew and the use of pots was grown. Since that time the pottery industry might be started.

The art of pottery is very old in Nepal. The actual history of pottery tradition emerge in Nepal is not available. But from the Pre-historic studies it is found that the history of pottery is considered as old as the history of Kathmandu valley. There are potsherds, unearthed during excavation in different places in the valley, which support the idea to be true. During an excavation at Handigaun in Kathmandu between 1984-1989 A.D many such things have been founded which support the idea that Nepal was familiar with the art of ceramics and art of pottery a long ago.

Excavation at Handigaun(ISMEO and HMG/N) between 1984-1989 suggest that there were settlements in 1st century BC to 15 century AD. Among the important findings of this period are the red sand stone fragments and large sized bricks. This indicates that potters of Nepal were familiar with the art of brick making even about two thousands year ago. Excavation in 1965 at the same place (Handigaun) found fifteen-pot type were also founded which were estimated that of 2nd century BC. It is evident that Handigaun, the eastern part of the Kathmandu valley was inhabited and urbanized since that time

Different types of statue, some potsherds, clay model of some animals were found in excavation at Mayadevi temple at Lumbini, at Tilaurakot, Taulihawa, Dang. From these facts it can be stated that Nepal has the culture of pottery for more then two thousands of years (Mishra, 1996)

There are so many temples made of brick, statues and other things still today to convey the development of pottery in Nepal from very early time. The bricks and statues of Chatur Maharaja made of terra-cotta in the famous Mahabouddha temple shows the talent Nepali arts in terra –cotta. It is supposed to be more than four hundred years old. There are so many Ankhijhyals(Pigeon window called windoket)seen in the houses of the potters of Bhaktapur. Those artistic clay products are supposed to be two hundred to four hundred years old. This implies that the art of pottery is also one of the main elements of our rich and prosperous cultural heritage. Potters are the preserver and carrier of the culture of pottery. Though there are many potters belonging to different caste groups and residing in the different parts of the kingdom but the Tharu of inner Terai and the Newars of Kathmandu valley are very famous for their art in pottery making.

There is not any formal historical record about pottery industry in Nepal even though Ganesh Prasad Khanal (1999) stated in his dissertation that history of pottery industry can be divided into following periods.

Ancient Period

In this there was no substitution of soil vessels. Comparatively, soil vessel production was flourished.

Medieval Period

In this period, metallic vessels were made but the importance of soil vessels was not decreased. This period form 9th to 19th century. This was Malla period.

Rana Period

This period was not good for pottery industry. Ranas, the dictative rulers of the period started to import foreign goods and many cottage industries were lost. This period was 1846-1950.

Present Period

This period is started from 1951. This is rising period of cottage and small industries. No more was done for pottery up to 1982. Various measures are taken to develop the pottery industry and few institutions are also active in this field.

4.4 Pottery Industry in Bhaktapur

Development of pottery is not a recent phenomenon in Bhaktapur. It is as old as the civilization of Nepal. Since the beginning of civilization the pottery was known to all. The pioneering work of pottery was done by potters (Kumale). In the beginning, there were two types of potters in Nepal-1. Tharu Kumhale 2. Newar Kumhale.

Tharu Kumhales lived in Dun Pradesh of the Inner Terai, who were shifted in valley. They were different from the Newar Kumhale in several respects, such as language and culture. In this respect Chudamani Bandu writes in his book named “Nepali Bhasha ko Utpati” or (origin of Nepalese language) that Tharu Kumhale have their owned separate caste, language and culture. They make pots. But the great Historian Babu Ram Archarya said that Tharu Kumhale has shifted to valley while Chudamani Bundu did not mention about it.

Newar Kumhale had lived in valley from the very early time. They were not shifted from any places. As the Tharu Kumhale, they have not their own special language and culture, even though they also made pottery. They live like the other Newar family of the valley.

According to some potters of Bhaktapur, some of the potters are immigrated from Simranghad with the followers of goddess Taleju Bhabani, who observed the religious custom “Lanpuja”. It is said that when they have come to Bhaktapur, they have missed their way from going back. For the opening of way, they worship the way i.e. “Lanpuja”. This worship is done on the second day of Baishak(new year). Mostly this worship is done by the potters of Suryamadhi. Instead of this, the potters of Talako worship Suryamadhi Ganesh on the fourth day. Again,some say that some of the potters of Bhaktapur are immigrated from Nala (a village of Kavre district) with the followers of the goddess Navadurga. Hence every house holds of potters have given pottery goods for the worship of Navadurga and Taleju Bhabani once a year. It is also interpreted that the history of pottery making is also associated with the origin of Jyatha Ganesh i.e. the oldest Ganesh existed at Talako in Bhaktapur .It was discovered by Haku Raj, who was also a potter. It was before the entrance of Navadurga and Taleu Bhabani in Bhaktapur. It proves that since the very early time potters are found in Bhaktapur. Totally they were not immigrated from the other place. The pottery products of Bhaktapur produced by the Newar Kumhale are famous all over the kingdom of Nepal. They are more skillful than that of the other places.

According to Jyasthiti Malla ko Jatimala N.S.515 Banshavali of Nepali partII, there are eight kinds of potters only within a valley. But it is not mentioned about their types and works. Now at the present context though there are existed only one caste of Kumhale, the other caste like Awale, dakarmi is also similar to the kumhale. They are acceptable for marriage relation. In this regard Dr.D.R. Regmi writes in “Medeival Nepal”, there are two types of kumhale. They are 1. Dha-dampu kumha and 2. Hakumila prajapati.

Some people classified Hakuja kumha andHyanja kumha. These two groups of kumhale specialized in making black vessels and red vessels respectively. The black vessel making artisans seem to be the early settlers of the Bhaktapur , who do not observe “Lanpuja” established by the late comers. Because the artisan of

black, vessel of Talako do not observed “Lanpuja”. The economic states of the potters of these places is different, although both of them are agriculturists. The potters of Suryamadhi are well being in economically that of the Talako.

Before to know the works of kumhale one must have known about the meaning of Prajapati i.e. kumhale. Although there are been many meaning of Prajapati, in moral sense it means the creator of things. We know that all the living creatures are created by the lord Bramha and the non living creature is created by the lord Bishokarma. Potters are also like a Bishokarma. Because they produced all the necessary things for the living creature. So that the potters (specially of Bhaktapur) do not eat the meat of the duck. Duck is a vehicle of the lord Brahma. The other cause is that duck is their owned teacher. It is said that once a potter was firing the pots. Most of the pots were broken he became sad. At that time a duck came there and cried “Fiti-Fiti” i.e. put sand in their language. Then after, the potter mixed sand in clay and make pottery. And the pots were prevented from breaking . The potters thought that duck is their teacher. Therefore from that time the potters mixed sand in the clay for the durability of potteries. But now a day most of the potters do not mix sand except the artisans of bulky vessels and pottery making during Jyalu period due to easiness in their work.(J Dikerson, 1974)

The historical development of pottery in Bhaktapur is very old in this way. As there is not any historical records about the beginning of pottery in the country, there is not any exact historical records about the beginning of pottery in Bhaktapur Municipality. Even though, Sanu Maiya Sakha has classified the history of pottery in Bhaktapur in the following periods in her Dissertation. In the same way Chadani Prajapati had followed the same classification

The historical development of pottery in Bhaktapur had been classified in the following period.

Ancient Period

It covers the time from the beginning of the human civilization to the Lichhavi period. At the beginning of the civilization wants of the people were unlimited. All of their daily necessary utensils are made of clay,viz, thal, Kachaura(mila), Bhegacha, Tapa(water vessel for storing purpose), Ghacha(water carrying vessel), soli(drinking pot of wine), Bhanga, Kopan, Chillim, pala, Dewa

and other pots for cooking and religious purposes. There was not development of modern substitute products for the pottery. There have been flourished pottery; because of the fact people were ignoring the importance of available mining resources. Due to the lack of their knowledge, even the rulers of that periods had made clay coin as their monetary unit in owned country.

Medieval Period

It covers the period between 9th century to the later half of the 19th century. Some development took place in the middle of age on the construction and design of the pottery. During that period people gradually come to know the importance of mines. They exploited available mines and used it for the different purposes. This fact was proved by the existing different status, temples, idols, bell etc of that period, which is still alive. People could substitute the pottery by other metallic utensils by discovering the various mines. Even it was done, the importance of pottery was not decreased. The pottery product was used for various purposes in their tradition of that period. For an example the ruler of that period smoke hukka by fitting chillim. At that period there have been more advanced in stone, wood, and metal crafts rather than the pottery. Yet it was, there have been developed the use of clay in the form of brick and construction materials for the purpose of building and temples.

Rana Period

It covers the period between 1846-1951. During the Rana period, though many British, Indian goods and luxury goods. But the daily used utensils were not imported. Because of this reasons the pottery making activity was not stagnant in that period. At that time some modification were brought in the field of traditional design of the pottery: due to luxuries nature in the living standard of Rana family. They tried to copy the pottery in England. It is used that the Rana Prime Minister Chandra Shumsher used to take his meal on the clay vessels (plates). From this fact it was proved that even in Rana regime though the cottage industries were not flourished, the pottery making was still existing.

Present Period

After the down of democracy political as well as social condition has also changed. In the field of pottery there was not so much change. Pottery is daily used

utensils, are not costly as compared to the other utensils made from metallic materials. It is demanded by all people of the country poorer to the richer one. Hence yet there have been political changes it has not effect on the pottery making industry. It is still existing due to able to make new product for the changing demand of the people.

The development of pottery making in different historical period is not remarkable change. At present the pottery has increasingly importance due to making of tourist oriented curio product by realizing the demand factor of the pottery. They made clay pots, flower vases i.e. Gamala, Ashray, Candle-stand, Mask, Sukunda, idols of different gods and animals etc. people have started to make various kinds of potteries that are more attractive as demanded by the people.

Now recently there have been develop a kind of pottery product i.e. feed vessels. It looks like a plate making hold at a regular interval of 4" on each edge of plate for the purpose of hang the plate by fitting string on each hold. It was introduced since 14 months before. This is learnt from the village in course of their movement period, it is called "Jyalu- Wonejya".

In this way pottery industry is started from the beginning of human civilization. Because of soft nature and easiness of getting soil, man started to make clay pots when they realize the necessity pots. We can easily guess that the first vessel made in the world is of clay. People are fond of clay pots because they are easy to make, cheap to buy, attractive to decorate. Some pots are very useful in human life. Because of usefulness of this industry, its history is as long as human civilization in the world. Other vessels made of plastic, metal, glass, or others may support to the pollution of our environment. But broken pieces of pottery products can be mixed in soil by making grinding. So, by using pottery products instead of vessels made of plastic and glass and we can prevent our environment from pollution. It is wished that people on the earth will realize this fact and the history of the pottery industry will go in further developed condition in future. The future of the pottery industry will be more bright in coming days.

CHAPTER - V

SOCIO ECONOMIC CONDITION OF POTTERS

Within the Madhyapur Thimi Municipality various caste and social groups are residing over there in harmonious manner. Newars appear to be the most dominant group. The non-Newars such as Chhetri, Brahmin, Rai, Magar, Damai, Sarki etc. are also fairly sizeable in the population. However, in the Newar community due to their skill many subgroups are available. Bajracharya are skilled on ornaments and jewelry making. Prajapatis are famous for pottery and ceramic works. Manandhars are experts on oil extraction activities. Shrestha are famous for merchandising and trading work. Nakarmis are good for heavy metallurgy and iron works. Nakarmi and Bhasima are expert on farming practices especially the vegetable production activities.

The structure of employment in the valley population is clearly different from that does appear to a lesser extent in Patan and Bhaktapur. The supposition could also refer to Thimi (with a few reservation). A characteristic sign of the employment structure of Thimi is the combination of a craft i.e. trade with agriculture. Only few inhabitants of Thimi are full time farmers. The majorities are part time and supplementary farmers with few exception, all inhabitants of Thimi are involved in some way with agriculture as part time or supplementary farmers or as tenants.

5.1 Social Condition

5.1.1 Demography

The research area (Thimi) is totally inhabited by the Newars. It is hard to find even a single household of any other caste group in the area. But typically there are only the Prajapatis (Chhapacho). It is homogenous community of Newars. At Thimi, where the Newars of different sub-caste groups or occupational caste groups have been residing for very long time which is immemorial to the dwellers themselves. The main sub caste group inhabiting in the Thimi are merchants class i.e. Shrestha, pottery making class i.e Prajapati, the Jyapus etc and other occupational caste groups too.

Most potters live in Chapacho VDC (ward no 8 and 10).The estimated population of potters is given below.

Table No.1: Population of Potter' Family

Ward no	No of potters' household	Population
8	160	1225
10	150	1073
	310	2298

Source: Field survey 2007

According to table no. 1, the total households of potters in ward no. 8 and 10 are 160 and 150 respectively. The total population of ward no. 8 and 10 are 1225 and 1073 respectively.

5.1.2 Age Structure

The age acts as variable in determining the social status of an individual and it determines the capability of the potters to work. An attempt has been made in this study to analyze the age of potters family. Potters family of varying age group are found in this sector.

Table No.2 : Age Structure of Potters' Family

S.N	Age group	Population					
		Male	%	Female	%	Total	%
1	0-4	7	6.19	5	5.43	12	5.82
2	5-9	8	7.01	2	2.19	10	4.85
3	10-14	6	5.30	14	15.21	20	9.70
4	15-19	12	10.61	7	6.52	19	9.22
5	20-24	17	15.04	9	9.78	26	13.10
6	25-29	11	9.73	10	10.86	21	10.19
7	30-34	12	10.61	8	8.69	20	9.70
8	35-39	5	4.42	4	4.34	9	4.36
9	40-44	7	6.19	10	10.86	17	8.25
10	45-49	5	4.42	3	3.26	8	3.88
11	50-54	5	4.42	5	6.52	10	4.85
12	55-59	-	-	1	1.09	1	2.42
13	Above 60	18	15.92	13	14.13	31	13.59
	Total	113	99.86	91	100	204	99.93

Source: Field Survey, 2007

The table no 2 shows that the highly aged potters are found to be above 60 years, that is 13.59% and the lowest number of potters are found between the age group 55 to 59 that is 2.42% in the study area. Similarly the highest number of male and female potters are found in between age group above 60 and 10 to 14 respectively (i.e 15.90 % and 15.21%) and lowest number of male potters are in between age groups 35-39, 45-49 and 50- 54 that is 4.42%. The lowest number of female potters is in between age group 55-59 that is 1.09%.

5.1.3 Educational status

Education is one of the indicator of potters’ status. This is crucial fact for not only availing employment opportunity created in the process of modernization but also for communication. Education attainment has become a most valuable indicator of potters’ social status. The following table show the education status of potters.

Most of potters of Chapacho VDC are literate. But they are not highly educated i.e they don’t have high qualification. And all the old aged people are almost illiterate.

Table No.3: Literacy status above 5 years

	Male	%	Female	%	Total	%
Illiterate	18	17.64	33	37.94	51	26.98
Literate	84	82.35	54	62.06	138	73.02
Total	102	100	87	100	189	100

Source: Field Survey, 2007

Table no 3 shows the literacy and illiteracy percentage of male and female of the study area. Male literacy and illiteracy percentage is 82.35% and 17.64%. Similarly female literacy percentage is 62.06 %. Females are less literate than the males. In average only 73.02 % are literate.

Table No. 4: Education status of Chapachho

Qualification	Male	%	Female	%	Total	%
Illiterate	18	17.64	33	37.93	51	26.98
Pri-primary	32	31.37	18	20.68	50	26.45
Primary	4	3.92	4	4.59	8	4.23
Lower secondary	8	7.84	8	9.19	16	8.46
secondary	27	26.47	17	19.54	44	23.28
Higher secondary	10	9.80	6	6.89	16	8.46
Bachelor	3	2.94	1	1.14	4	2.11
Total	102	100	87	100	189	100

Source: Field Survey, 2007

The above table shows that the majority of potters' family are illiterate. Among them 26.98% are illiterate, 26.25% are under pri-primary, 4.23% are primary, 8.46% are lower secondary, 23.28% are secondary, 8.46% are higher secondary, and 2.11% are bachelor. Female literacy percentage is found to be less as compared to the males.

The conglomeration of different national and regional educational center in Madhyapur Thimi makes this municipality quite a popular one. Now it has become a center of education in Nepal. The involvement of Examination Controller Office, Janak Shiksha Samagri Kendra, CTEVT, SOS Curriculum Development center, Higher Secondary Educational Council, Vocational Training Center etc. Also shows the education facility and real infrastructure of Thimi municipality.

5.1.4 Cultural Heritage Site

Madhyapur Thimi is well known for its diverse art, culture, festivals, dance, traditional music and life style. Many of the existing temples and places of religious importance date from pre-historic time. The 32 chariot festival (Bisket Jatra), the tongue perching festival and living music and dances are the real identification of Madhyapur Thimi and it has made Madhyapur a living museum. Most of the temples, shrines and monuments are set within the old settlement areas of Bode, Nagadesh and Thimi. There are also a considerable number of places of religious importance located in other parts of the municipality.

According to the Monument Inventory List, there are 246 objects within Chapacho to Balkumari area with 98 Dharmashala and 148 monuments out of which 53 monuments needed to be renovated. The inventory has not completed for the whole Thimi, which has to be carried out. There is no stop for tourists in between Kathmandu to Bhaktapur. Thimi has to make efforts to attract its potential tourists by exploring its cultural identity and values. There is a saying in Nepali “Hamro kala hamro Sanskriti, Madhyapur Thimi hamro sampati”, which means our art and culture are our assets. Hence, Thimi has potential to be a cultural heritage city.

5.2 Economic Activities

The potters of Chapacho belong to middle class. Economically they are neither too rich nor too poor i.e they are in middle condition. Various sources of income have made their condition sound. Some of the potters have two means of subsistence agriculture and pottery. But those potters who have large number of family members depend only on the pottery production to fulfill their daily needs. In this way, pottery production has become primary and agriculture have become the secondary occupation in this place.

The reason for being agriculture as the secondary occupation is insufficiency for the fulfillment of basic requirements through the income earned. Besides pottery and agriculture their young children are found to be involved in different services, official job, wage earning, teaching, business, driving etc.

Mostly they send their children in government schools, wear simple clothes but they spend most of their earnings in feasts and festivals as we know Newars are rich in culture and tradition. The income of all households is earned through pottery production. However they have other sources of income too but the sources are different.

Table No.5: Average Annual Income

S.N	Sources of income	Income(Rs)	%
1	Agriculture	6750.20	3.27
2	Pottery	150560.64	72.99
3	Services	25467.82	12.34
4	Business	15256.23	7.39
5	Others	8234.37	3.99
	Total	206269.26	100

Source: Field Survey, 2007

The table no. 5 shows that the average annual income of potters is made from agriculture, pottery, services, business and others. Maximum income is made from pottery production that is 72.99% and minimum income is made from agriculture which is 3.27%.

Table No.6 : Average Annual Expenditure of Potters

S.N	Categories	Expenditure(Rs)	%
1	Food	59468.42	39.61
2	Education	33842.26	22.54
3	Health	15562.48	10.36
4	Clothes	20786.12	13.84
5	Entertainment	5267.34	3.50
6	Feast and festivals	10457.62	6.96
7	others	4743.51	3.15
		150127.75	100

Source: Field Survey, 2007

The table no 6 depicts the expenditures are made in different sectors like food, education, health, clothes, entertainment, feast and festivals. Among them, the expenses is done at maximum rate in food (39.61%) and the least is done in entertainment and others (3.50% and 3.15%). Similarly 22.54% is done in education, 13.84% in clothes, 10.36% in health and 6.96 % in feast and festivals.

5.2.1 Agriculture and Farming

Thimi is famous for fresh vegetables. The communities who are specialized in farming activities mainly on production of various crops are usually termed as Jyapu(s). They cultivate land, grow crops including vegetables and harvest the crops and sale to the market. In Thimi there are so many laborious farmers. The people who are not involved in pottery mostly engage in farming specially vegetables. The importance of Thimi is not only the pottery making but it is also very famous for fresh vegetables.

Even today, Thimi produces approximately a total of 20 mini bus loads of vegetables daily in cool season but lesser in rainy season. These products are being marketed in Kathmandu, Lalitpur and even in Bhaktapur. In addition to these markets, ample opportunities for supplying vegetables are available in the markets

located outside the Valley since Thimi can produce vegetable is the season that become off season products for outside markets of Terai and inner Terai. However, the increasing population pressure in the valley has demanded more fresh vegetables of different kinds. To meet such demands, vegetables in large quantities are brought from outside the valley in recent years. This is an additional opportunity for growing vegetables in the Madhyapur area with and immense scope of technological advances.

5.2.2 Cottage Industry

Wide ranging types of cottage industries are found in operation in the old urban centers of Thimi, Nagadesh and of Bode, principal among them is the pottery industry. Most of the households of Thimi area practice pottery making. Pottery making activities like clay preparation , clay molding, firing of pottery are found going hand in hand. The potter cottage industries are the major air polluting industry of Madhyapur Thimi municipality. The importance of the potter's workshop in Thimi is supra-regional and extends for beyond the borders of Kathmandu valley. The pottery workshops are situated on the ground floor of the houses. Here the unbanked potteries are placed in the streets, in courtyards, squares and on terraces to dry. When there is enough clay goods no exported, a kiln is constructed in the courtyard and the clay good are fired. The kiln burns continually for 3 or 4 days. After it has cooled down, the ready clay goods are carefully taken apart.

5.2.3 Animal Husbandry

As it has been already mentioned there is no any forest and there is no any chance of being any wild animals in the area. However, there are found some birds of different types in river side.

Oxen and he-buffaloes are not used for ploughing. They do not domesticate any animals. Most of the farmers of Kathmandu valley, not only of Thimi, till their land themselves manually by using spades. So they not have to keep animals to till their land. Domistification of animals needs an extra labor. They have a little time to look after animals. There is no grazing land and most of the potters of the study area always engage in potteries. But one interesting thing is that in and around the Kathmandu valley most of Newars rarely domesticate any animal.

Some people do keep some chickens which in fact needs no labor and place at all. But the Prajapati whose main occupation is farming, domesticate some goats. In Thimi most of the Jyapu have more than one goat.

5.3 Constraints and Potentials

Areas were designated as constraints and potentials depending upon the possibility of using areas as built-up areas or not for future development. Some area may be constraint for certain land use but it may be potential for another land use. For instance, steep slope area is constraints for housing and commerce where as it is potential for forest and conservation. The fertile alluvial plains of Manohara should be protected for agricultural use and flood plain area along Manohara and Hanumante rivers should be protected. Further forest areas are also to be protected. There are industrial areas, institutional areas landslide areas and area with slopes more than 15%. There exist infill areas around existing residential areas. Some areas are covered by Sinchitar land pooling areas and its vicinity. Availability of low suitable land of agriculture like in Kamerotar also exist. And there is high suitable areas for housing and commerce designated by land use suitability analysis map.

CHAPTER - VI

PROCESS OF POTTERY PRODUCTION AND MAJOR POTTERY GOODS

In study of any industry, process of it is most important. How, why and where an industry locates is the most important fact to establish it in good way. When we study on any industry, we can not neglect Von Thunnen's theory of industry. He states in his theory that many factors play a vital role in the successful establishment of an industry. Always, objective of establishment of an industry is to make some profit. For this purpose, the enterpriser always try to minimize his cost of production and maximize productivity and profit. If an industry has not been established in proper place observing all factors affecting the industry, it can not get any achievement and it vanished its existence forever.

6.1 Affecting Factors of Pottery Industry

There are so many factors which are involved in the success and failure of any industry. Similarly pottery industry is also affected by so many pull and push factors. Some of the essential materials for this industry are capital, land, raw materials (clay, sand), manpower etc.

To be in the centre of any place is called the localization. There are many factors which determine the localization of any industry. Pottery industry is localized in certain location of our country. They are Surkhet, Janakpur, Salyan, Bhojpur, Dhankuta, Jhapa and Bhaktapur. Even some walking potters are also seen in our country. They used to go any place according to their decision and settle there temporarily and they make potteries. But it is not accountable to the view of industry. So these potters are not explained here.in Bhaktapur district village of Madhyapur thimi municipality namely Balkumari, Chapacho and Bhaktapur municipality itself are pottery areas.

According to Sanu Maiya Sakya, "various factor governs the location of pottery industry in a particular place, such that raw materials, power resources market and skill of the workers etc. The most advantageous location of industry is that at the cost of gathering materials and lubricating it plus cost of distributing the

products to the customers is minimum. These various forces pulling the point of production towards the place of consumption on the other and, may be regarded as tending to establish at some place appoint of minimum total transport costs.

Thus the cost of gathering the raw materials and distributing the finished product is the main responsible factor to the concentration of the industry.

The location of pottery industry differs from the other industries. The location of pottery industry is not entirely influenced by the factors governing the location of an industry.

“Potters live at the link road between the town and village. It shows that most of the pottery products are demanded by the people of village and development of civilization. The answer of the question why they did not settle at the middle of the town is that: on the various process of pottery production, they have to fire the potteries, which throw out the smoke; it is harmful to the society. And they also have to face the problem of throw out the waste material. So that the pottery units are not located in the middle of the town.

The feature of the settlement of the potters is that they live on the slope land i.e. neither hill nor plain. On the process of pottery making, there have been much waste materials like broken pots, ash, all of these waste materials they throw down from there. They have no problem to throw out the waste material by carrying to the distance. Thus from the settlement pattern of potters on can easily understood the potters place.

Mostly they live around the courtyard or the Bihar: where there will be stupa of Buddha according to their needs. There has been more religious tolerance in Buddhism than in Hinduism.

Land

Land is the most important factor of any industry. For any industry room is the compulsory thing. If there is no empty place to establish industry it is not possible to originate the industry. “Land is base, everything depends and remains on. In the context of pottery industry, we think land as a necessary input. The importance of land is cleared at the time of throwing and drying the soil ware. We mould the clay, putting in land and also we get the clay from earth. Land as an economic term, means all the goods which are freely available from the nature. Air,

water, sunshine etc. are included in the definition of land but in our term, we have to mean land as the gift by nature as a form of soil in special term. The place which is used in the process of production is narrow.

Why potters use land is a question to be answered. As an answer we can say that the land is necessary for moulding, throwing drying, and firing. So potters live in Bahal which is a common place for production.

Above discussion has cleared that land provides space for production. Besides this function, land serves as a repository of physical chemical and elements which are almost necessary for pottery production.

Thus land is the compulsory thing for the pottery production. We can not do any pottery work without land. So land is the most important factor which influences the pottery industry.

Capital

Capital is the other most important factor which governs in the establishment of any industry. We can not begin any industry without investment of money. Capital is the well introduced factor and it plays a crucial role in promoting a faster rate of growth in any industry. Capital is known differently from land and labor. Capital is produced factor which is used to produce something accumulating it. The non consumed amount of production is known as capital. Like this, machines, tools and other things used in production are also known as forms of capital.

In the process of pottery production we mean by the term capital that the thing used like clay, wheel, sand, water, coal, chawali, ash, martol, chemicals etc. in our sense buildings are not known as capital, because they are not made by the purpose of pottery production but they are only used secondarily. The production of the pottery in the houses made for living people is only the secondary purpose. This need not mean that building, ever in pottery, is not capital, but these buildings which are made only by the purpose of pottery production are known as capital goods.

Pottery is the traditional occupation and it is not capital intensive. In ancient time all things were free and only labor was necessary to produce the pottery. Clay, water, sand, fuel etc. were free.

But nowadays the situation has changed and these things are payable and are not available without paying. Being traditional occupation, it is easy to maintain these goods for potters. They make their tools themselves including hand-wheels. Besides this, they need some amount of capital and these are the sources of capital:

- i. Their own savings
- ii. Projects like CPP
- iii. Government credit

Thus capital input for the pottery is not so much. This industry is mostly labor intensive. But again, to buy moulding machine, wheel, clay, sand, straw and for transportation of raw materials and production some amount of money is needed.

The source of capital investment for production is not the one. There are different types of sources of capital. Most of the potters invest from loan for pottery production. Some of them invest from services and others.

Table No.7: Source of capital

S.N	Sources	No of family	%
1	Agriculture	5	16.13
2	Services	3	9.68
3	Business	4	12.9
4	Pottery	6	19.35
5	Loan	10	32.25
6	Other	3	9.68
	Total	31	99.99

Source: Field Survey, 2007

According to table no 7, most of them (32.25%) get their capital investment from the loan. Similarly 19.35% households get from pottery, 16.13% from agriculture, 12.9% from business. And minimum household i.e 9.6% get from services.

Raw material

Availability of raw materials is the other factor of localization factor of industry. Any industry cannot be conducted without raw materials needed for it. So,

we must think about sources of raw materials before the establishment of any industry. Pottery industry also needed some raw materials which is described below.

Clay

Clay is the most important raw materials. It is impossible to produce clay pots without it. Clay of the best quality should be available for the production of strong vessels. There are many kinds of clays in the surface of the earth. All kinds of clay are not suitable for pottery industry. And there is no substitution available for the clay in pottery industry.

Straw and Chhwali

Rice straw and chhwali (dry plant of wheat) are the other raw materials for the pottery industry. These are used in the form of fuel to firing the pots. In Chapacho these things can be easily found. Because Kathmandu valley is the area of rice and wheat. Productivity of rice is very high in Kathmandu valley. So rice production is very high in this place too and availability of rice straw is very common in this place. So straw supply for pottery industry is very easy.

The alternatives for straw and chhwali are wood and kerosene which are mostly used in Ceramic industry.

Water

For the purpose of conducting pottery industry, water is also necessary. In pottery industry, water is necessary for not only moulding clay but also for making it smooth, to wash hands, legs and cloths every time. After working in the clay, it is necessary to have bath everyday. Sometimes, it is necessary to have bath more than two or more times also. So water is also must necessary material for the pottery industry. Pottery industry can not be conducted without water at all. So most of pottery industries are established in the side of rivers.

Sand

The next material is sand for the pottery industry. It is also important like clay. If earthen vessels are made from the clay without suitable proportion of sand, the vessels will not be durable or strong. It will be broken in the time of firing. Sand

is necessary to mix in the clay at that time when the proportion of sand is very low in it. Sand is mixed in clay before moulding. After shaping (or throwing) they use sand when the pot is making strength before drying in the sunlight. They put the sand on the vessel and beat by mungro, a type of hammer made of wood. Sand is necessary for the time of firing, too. Vessels are put in a certain sequence and wood, sand, straw or chhwali be put. After that, kiln is covered by sand. Because of covering the kiln by sand the heat is stored inside the kiln.

Skilled Manpower and Labor Force

The other factor affecting an industry is the skilled labor and labor force. Any industry cannot be originated without workers. Two types of labor forces are necessary for any industry of factory. One type of laborers is skilled ones and the other is the one to help the skilled ones. So the wages of skilled laborers are higher than the other one. In the pottery industry, 2 types of laborers are necessary. If both types of labor forces are not available, pottery industry cannot be conducted. So, when the pottery industry is established we should considered about the both of labor forces. The availability of workers is also the main factor of determining the localization of pottery industry. This industry is specially conducted in cottage near their habitat. So it is easier to look after their work without any problem. In the most of pottery industry, the enterprisers themselves play the role of owners, managers, laborers, investors and technicians. So they usually establish their industries near their home, so that they could care their own business themselves at any time daily.

Market

Market is also the most important factor of localizing factor of any industry. Market means the facility of selling goods produced by any industry. If there are no consumers of goods produced from the industry, there is no necessity of industry in that place. So, without demand of anything, production of that thing is useless. This fact cannot be neglected at the time of establishing any industry or factory. If a rice mill is established in Himalyan region, it will get work, hardly. In this fact, there is no question.

In the same way, for the pottery industry also market is most essential factor. A pottery industry cannot be originated if there is no market for it. It people of a

place are very rich and they use only metallic glass and others but they don't use earthen ware, then there is no necessity of pottery making industries.

Kathmandu is a suitable market center for the pottery vessels. Less number of vessels are sold outside the Kathmandu valley.

Transportation

Transportation is the other most important factor determining the localization of any industry. If there is no transportation facility, it is difficult to transfer the raw materials needed for the industry up to the manufacturing place and on the other hand, it is very hard to move the production to the market. So, without transportation, any industry cannot be established. Especially for the pottery industry, industry transportation is the most necessary factor because its raw materials viz, clay, sand, etc. are difficult to carry without means of transportation. On the other hand, production of pottery industry is also difficult to send to the market without transportation. In the past, farmers had to sell their products by carrying themselves to the villages near their place. It was not only very difficult but also time consuming. Nowadays, plenty of transportation facilities are found in many places. So it is very easy to transport raw materials and products of pottery industry in Chapacho.

6.2 Simple Method of Pottery Making

In the study of process of any industry, method of producing the output is very important. The major process in pottery making is as follows.

6.2.1 Collection of Raw Materials

The basic material for the pottery industry is clay. It is found somewhere within a few miles from the town. There have been found great many varieties of clay that are useful to the potteries. The raw clay consists of primary clay particles and unrecompensed feldspar mixed with other component of the igneous rocks from which it was derived, usually appreciable quantities of mica, iron oxides and other substances. The composition and thus the behaviour of clay from different sources are therefore slightly different. Pottery is made from special clay plus other materials

(like sand) mixed to achieve the desired result. In Madhyapur Thimi mostly the potteries are made from brown clay.

Clay is obtained from the clay mine. Before going to take the clay, first they clear off the top soil, which is harder than the clay of lower strata. When they cleared a space about 10/12 feet across, they dug saucer shape hole in the clay, leave the clay in the hole, till they got it about a foot deep. In this regard Mr. John Dickerson writes that the most satisfactory method of obtaining working clay is to dig it directly from the earth and prepare it suit your needs. Clay can be found in most areas although the deposits may be unsuitable.

In ancient period, potters use to visit the clay mine themselves and carry the clay by using Kharpan (i.e. basket hung on a wooden pole) and some use to bring by tractor, truck or some other means. But nowadays, potters do not need to visit the clay mine themselves to bring the clay. They order middle man (thekedar) to bring the clay and clay is brought to the required place. In this way the process of bringing clay has been made easier.

After collecting the clay from the source the other raw materials like sand, straw, chhwali, water, coal, fire wood, kerosene etc are also collected. Preparing these all materials, production work can be started.

6.2.1.1 Source of Raw Materials

Establishment of industry is greatly influenced by the sources of raw materials. Clay is the basic raw material for the pottery production. The clay can be found somewhere within a few distance from the Chapacho VDC. The local potters of Chapacho VDC bring clay from Sintitar, Harisiddhi and different VDC of Bhaktapur district like Jhukhel, Jagati, Duwakot, Chhaling, Changu Narayan, Sirutar etc. Modern types of potters (ceramics) bring clay from India and out of the valley i.e. Dang district (Tulsipur and Deukheri). The traditional types of productions Gagro, Ghanto, Handi, Hansi, Potasi, Jasi, Kopun, Chillum, Khutruke, Makaol, Aгаа, Gamala, Surai, Bhuit, Ghyampo etc are used for local people and remote village outside the valley. Modern types of productions like tiles, cup, plate, image, tea pot, astray, candle stand etc. for the production of these materials sand is not needed to be mixed but the local goods need sand for their preparation. Local potters bring sand for pottery production from backside of Chapacho VDC (Siddhikali),

bode, Saraswotikhel, Nilbarahi and Manohara river. For firing they need chhwali and straw and they collect these materials from their neighbor who doesn't need them. Kerosene, woods is also needed for ceramic industry. According to the potters they are facing the problem due to the high price of fuel. Beside the clay "lancha"(yellow clay) is also necessary for the polish of the vessel, specially in red vessels. They bring yellow clay from Tika Bhairav(Daksinkali). Red clay is used in ceramic production which they bring from Panchakhal. Ceramic production need many kinds of chemicals and color which they import from India.

S.N	Places	No of H.H	%
1	India	1	3.22
2	Dang	4	12.90
3	Jhaukhel	3	9.67
4	Jagati	1	3.22
5	Bode	8	25.80
6	Sirutar	2	6.45
7	Duwakot	4	12.90
8	Chhaling	1	3.22
9	Hari siddhi	7	22.58
		31	100

Source of Clay

The potters bring clay from different places. Due to availability of transportation they even bring clay from India, Dang. Maximum clay is brought from Bode (Sintitar).

Table No.8: Source of clay for Pottery Industry

Source: Field Survey, 2007

Table no 8 shown above shows the places from where the clay is brought. The clay is brought mostly from Bode. About 25.80% households bring from this place. Similarly, 22.58% from Harisiddhi, 12.90% from Dang, 12.90% from Duwakot, 9.67% from Jhaukhel, 6.45% from Sirutar and from India and Jagati equal households bring the clay i.e 3.22%.

Cost of Clay

The source area of clay is not the same. It is brought from different places. So the cost varies according to the place. The clay brought from the near places cost

less than the clay brought from the farther places. The cost of clay ranges from Rs 600 per Tractor to 2400 per Minitata. Approximately, it costs Rs 2 per kg.

Table No. 9: Total cost of clay for pottery industry (including transportation)

S.N	Price(Rs)	No of households	%
1	0-600	12	38.70
2	600-1200	8	25.80
3	1200-1800	7	22.58
4	1800-2400	4	12.90
		31	100

Source: Field Survey, 2007

From the table shown above it is known that, 38.70% household bring the clay at cost ranging from Rs 0- 600, 25.80 % bring at Rs 600-1200, 22.58% bring at Rs 1200-1800 and 12.90 % at Rs 1800-2400.

Source of Sand

Potters also need sand which they bring from different places. Most of them bring from Siddhikali Pakha. Less sand is brought from Manohara and Bode. Sand is needed just for local production.

Table No. 10: Source of sand for pottery production

S.N	Sources	No of households
1	Siddhikali	10
2	Nilbarahi	4
3	Manohara	3
4	Bode	3
5	Saraswatikhel	4
		24

Source: Field Survey, 2007

Above table shows that 10 households bring sand from Siddhikali, 4 households from Nilbarahi, 3 from Manohara, 3 from Bode and 4 from Saraswatikhel. Among 31 households, 7 are ceramic industries and don't need sand.

6.2.2 Preparation of Clay

When all materials are ready, then they stored them in their ground floor and in any suitable places. When they want to make pottery, they prepare the clay as follows:

"they pour water over the lumps of clay and is thoroughly staked with water. And allow it one or two days till it become totally saturated.

Then large lumps of clay may be broken by wooden hammer (Tetha in their own language). Some potters mix gray, white, red clay to obtain desired result. After this they knead clay on the ground with their feet. They spray a little sand on the ground so that the clay may not be sticky and add water until it reaches the desire consistence. This should be repeated until the most lump have dispersed or soften. Again they kneaded the clay by their own hand and by pressing i.e. the pressure coming from shoulder. While the clay kneading is done by machine in developed countries. The prepared clay should be stored near the wall and covered with plastic. This is done in order to make the kneaded clay soft so that the kneaded clay does not need to be kneaded again. But those who can't afford these machines, they borrow the machines from those who have the machines and knead or mould the clay.

In this way the soil is prepared to make the pottery making. They have to work hard to prepare the clay. But some potters have bought the moulding machines nowadays. For those potters who have this type of machines, it has become very easy to knead or mould the clay needed for pottery.(Picture no.1)

6.2.3 Throwing the Potter's Wheels

Wheel is the primary tool for the pottery production. Moulded clay is put on the wheel and wheel is rotated by power or by hand or by kick. Then using the two hands potters throw the pots according to the desire shape. A small wheel is used for small pots and big wheel is used for big size pots. 15-20 years ago potters used wooden wheels which were made by them selves. It was unscientific and very hard to drive. Nowadays, they used motor-tyre and it is easier than wooden wheel. It is explained above that there are 3 types of wheel. Hand driven wheel means that kinds of tools which do not need power or it is driven by the hand or stick.

The second type of wheel is the power driven wheel. It is very easy to use because no labor is needed to drive it. It is connected with the fuel-motor or with electric –motor. A switch is used to operate it. The higher quality production is provided using this wheel. Even there are many families of hand driven wheel users but now a days they have started to use this type of wheels. Most of the potters in Madhyapur Thimi use this kind of wheel.

The third type of wheel is the kick- driven wheel which is operated by kicking on its switch. It is easier to operate than hand-driven wheel but it also needs manual power.

At last we can see that it is also similar to the first type of wheel.

In this way wheels have been using from the very ancient period of the time. But it has come much more improvement in wheels. Nowadays, the number of potters who use power-driven wheels has been increasing rapidly in Bhaktapur.(Picture no.2 and 7)

6.2.4 Shaping the Clay

After throwing the wheel, the task is to shape the clay. For this purpose the potters put the lump of clay in the exact center of the wheel and press it to make a vessel according to their desire. In fact, the shape of a vessel entirely depends upon the skill of the potter himself. Because the shape is determined according to the potter's pressure on the lump of soil. Wheel is fixed in an earthen pit in front of their houses of first floor of their houses or in the cottage. The wheel is operated by power or a stick or by the kick of foot according to the type of their wheel. A potter pressed the lumps of clay by their hands to make a vessel while the wheel is turning. Usually, the potter pours water over the lumps after operating the wheel to make the work of shaping the vessels.

6.2.5 Opening the Vessels

The potters press downwards to make a depression in the top of clay lump. Opening the potter's left hand is held against the outside of the clay while the finger of his right hand is pushed down in the clay later, enlarging the opening is made by his thumbs. His right hand is braced against the left.

First the head, then middle and bottom part is made. Big vessels are also made through this technique. But they are made small size in part and later enlarged and joined together with a modeling wooden hammer by spraying sand; when they are half dried only.

Finishing the shape, they make smooth by a small bamboo rod; cuts may exceed clay by using twisted string. In the developed countries, it is done by knife. Throwing wheel used in pottery making is more or less alive in the world; only different in operation of wheel by stick and power driven.

All types of vessels are not made by throwing method. Hence fitting handle and tuki and biting for the enlargement is necessary to the compliment to the throwing method.

6.2.6 Drying and Turning the Vessels

Newly shaped potteries are allowed to dry slowly in the sunlight. When the pots are half-dried, they cut thickness on bottom of the vessels and make a hole. Beating with a Dawach (a knife of wooden tool) closes up this hole. This type of work is done by women. These were later enlarged by beating on its semi-dried condition. Mostly the potters have dried their pottery goods in front of their houses or in the open ground of their locality and courtyard. The products are dried from 2 to 5 days. During drying period they must have turned the vessels for saving the vessels from breaking due to high sunlight. At the same time they carve vessels by a Palancha (a kind of tool made from clay).

After drying the vessels are polished with the clay called “Lancha”(yellow clay). It is specially used in red vessels. Some potters use red clay instead of lancha.

6.2.7 Firing the Vessels

When the pots are completely dried, they are forwarded for the firing. A remarkable change takes place in the clay when it is heated and it will become hard, brittle and water proof. Further it will change color. If the sun dried vessels are not fired, they will absorb water and become soft and eventually collapses. After drying the vessels are fired in kiln. Basically there are two types of firing. *Biscuit firing* and *glaze firing*. Biscuit firing is a simple method of firing. It does not need accurate temperature. Gloss firing is the second time firing of biscuit firing. Mostly gloss firing is done for glazing the vessels. It needs high temperature at accurate level. It needs several chemicals for glazes.

After potteries are completely dried it will be kept in kiln for firing, firing protect the clay body against the effect of water. Kiln is a heating apparatus for all substances. It should be constructed in such a way that it gives uniform heat and for economy and efficiency. There are several kiln of firing that is used according to the intensity of the flame, flame condition, kind of fuel. The firing of finished wares are done at community kiln. They were fired in an open field on the surface of the ground and carved with a straw roof. Whatever you choose the basic principal is the

same, a slow increase of heat until the desired temperature is attained, followed by an equally slow and steady loss of heat until the pots may be removed at hand-heat.

For the firing purposes they put pots and rice straw layer by layer. Finally they covered with ashes. They also use waste farm products. And burn a wood on the small oven on the bottom. The whole things burned takes seven hours. According to the potters of Madhyapur Thimi the firing process is completed in 3/4 days and the firing temperature ranges between 500-800C. But gloss firing needs the temperature of 1050C. Potteries will be red in color after firing. As in the red vessels it will fired first then it will be polished by “Gisha”, and again it will be fired for about four or five hours.

The potters should have to keep vessels and straw layer by layer according to their sizes, otherwise it may be broken. If the potters could not cover all the vessels and straw bashes, the flame will come out and there will be fear of breaking of vessels.

During the burning period if it rains or blowing of wind occurs, then the fire extinguishes or firing of the surroundings may occur. Further due to blow of wind ashes are blown out making the environment polluted.

The potters must be quite careful during the firing process as there are many factors that cause the loss of heat like weather, moisture of ground, temperature and so on. Not only this, over and under flame can also cause great damages to the vessels. A slight change in the intensity of flame may bring the great damages i.e. Breaking of vessels occur in great extent. Due to small mistake in fixing the intensity of flame during firing, some times the 100% of their products are wasted. But there is no measurement for controlling the heat intensity. So firing process is carried out by the experienced potters only. Hence this is the general method of pottery making. It is completed in different stages. After the preparation of vessels, they are transported to market by the distinct means of transportation or by carrying themselves.(Picture no.3 and 8)

For Local Production

Picture No. : 1



Moulding clay

Picture No. : 2



Making potteries using wheel

Picture No. : 3



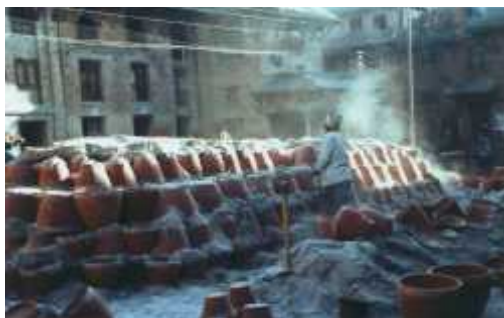
Preparing for firing

Picture No. : 4



Removing the thickness of Gamala

Picture No. : 5



After Firing

Source: Field Survey, 2007

For Ceramics production

Picture No. : 6



Clay storage

Picture No. : 7



Making potteries using wheel

Picture No. : 8



Firing

Picture No. : 9



Processing for market

Source: Field Survey,2007

6.4 Duration of Pottery Making

Pottery production is small industry done at leisure time in the study area. Generally most of the potters are agriculturist. Pottery making is done at the time off period from agriculture work. The pottery production is done in particular period that is from the second week of June, after harvesting of wheat they were free from agriculture work. At this time they collect the clay in their house. After 15th June to July last they engage in paddy cultivation. From 15th August they slowly start to work till 1st week of October which is the main season of pottery making. The great festival of Hindu “Dashain” also occurred within this period. At this time most of the potters engage 10/12 hours a day. They do the work at night due to the facility of electricity. There is also great demand of pottery goods for religious purpose like Bhiunt, Sali and Ghanto. At this time there is no rain, so there is no problem for drying and firing the vessels.

In the past, every house used to be engaged in pottery making. Due to the competition in market sometime potters are in lack of market in their territory. So they have to take their products for a distant to sell. Besides these potteries made by the potters of Chapacho far from their dwelling, in the place where there is transport facility are taken by vehicles. But in the place where there is no transport facility it is very hard to take the potteries and they carry themselves. Secondly, it is impracticable to take the potteries to a long distance between as there is always fear of breaking of potteries and the transport cost also make the potteries very costly to compete with local product. In such case, they have a tradition “Jyalu Wanegu”. It is Newari term which literally means going for job. During the winter season after completing the agricultural work, a single person or team comprising few expert potters go to different places especially in Terai or Dhading, Gorkha, Pokhara for pottery making. They stay there for two or three months according to the condition of market and demand of pottery goods.

Generally they go to these places in January-February (Poush) and return back to their home before April (Baishak) to celebrate Bisket Jatra. They used to go to the same place every year so it is easier for them to settle temporarily and manage to work. During the “Jyalu Wanegu” they sell their products on the basis of barter exchange of cash. Due to the difficulty in bringing the grains (they have got with exchange with pottery goods) they sell the grains in local market and bring cash with

home. Nowadays, the traditional system of Jyalu Wanegu has almost disappeared due to the transport facilities.

6.5 Major Pottery Goods

6.5.1. Importance and Use of Pottery Goods

The tradition of pottery making had started with the beginning of human civilization. The pottery goods are used by people in their daily life. The traditional pottery vessels are used by people in their local areas whereas the modernized form of pottery making i.e. ceramic goods are exported to foreign countries. The importance of pottery making can be described in many aspects.

The major occupation of Newar Kumhale of Chapacho VDC is agriculture. Even though during leisure period when they don't have work in their field they get involved in pottery making so that they don't have to be unemployed. So pottery making had provided them employment so that they don't have to stay idle doing nothing during leisure period.

The next importance of potteries can be illustrated through the need of pottery goods in Newar culture and tradition. Newars are rich in culture and tradition. They celebrate different festivals in different occasions. For these festivals, they need different clay vessels like Sali. Also from the religion point of view, potteries are important. During Dashain Jamara is kept in Bhiunt. Kumhales (Prajapati) are considered to be the creator of goddesses and gods because they provide clay which is needed for making the masks of those gods and goddesses. Further, potteries are needed for various traditions like worship of Navaha, Saptaha, Kanyadan, worship of Taleju Bhabani and Navadurga and so on. In Bhaktapur and in Chapacho too, the curd is made in the clay vessels rather than other vessels. When a person dies in Newar community, various rituals are to be performed after death. For these rituals pottery vessels like Handi, Ghampo, Soma etc are very essential. Without these pottery vessels those rituals are impossible to be performed.

Further, ceramic goods which are attractive are used in various hotels and restaurants for decoration. Tourists from different countries are curious to know about these goods so the pottery making helps in enhancement of tourism industry which will help in economic development of the country. Export of those goods

increase the national income. And production of pottery goods decrease the import of foreign vessels while will further help in saving of national income.

For the developing country like Nepal where majority of people are below poverty line there people can't afford the vessels exported from foreign countries which are very expensive. So the potteries which are cheap and easy to make are used by the people.

6.5.2 Classification of Pottery Goods

There are two types of pottery goods in the study area. First one is local production and the other is as ceramic production.

The pottery goods can be classified in following two ways:-

- 1 Traditional (non glazed) Vessels**
- 2. Modern (glazed vessels)**
- 1. Traditional (non glazed) vessels/ local**

This type of vessel includes old types of pottery production which are in use from ancient period. This type of vessels is made by hand using wheel or wood, tire etc. driven by human power. Ghyampo, Bhiunts, Makal, Kutruki, Hansi, Potasi, Jasi, Pala, Hukka, Chillim, soma etc are the examples of traditional vessels. The purpose of firing is in fact to make the potteries strong and durable. The vessel is fired only one time and is called *biscuit firing*. These vessels are also known as red vessels.

2. Modern (glazed) Vessels/ Ceramics

Modern types of production include the newly introduced potteries. They are made by power driven machines. The examples are cup, plate, spoon, water jars, candle stand, images, animals, ashtrays etc. They are more fine and better than the traditional ones. They are also called glazed vessels. These vessels are purified in glassy. And firing is done two times. The first firing is known as biscuit firing and second firing is known as *glazed firing*.

6.5.3. Identification of Pottery Goods

There are so many kinds of pottery wares. It is impossible to describe about all of them in details. However some of the pottery wares are described below.

I. Ghyampo

Ghyampo is one of the big earthen vessels. This vessel is called “Tepa” in local language (i.e in Newari). This vessel is of different sizes. It can be found from bigger to smaller. But usually, its height is about 2-4 feet. It has a circular base. It has narrower bottom and neck than the middle. Its diameter is about 1 foot in neck and bottom and 1.5 feet in middle. It is used to store food grains, water and sometimes wines. It is a heavy vessel. Its weight is about 20-30 kg. it usually has plane bottom.(Picture no.15)

II. Bhiunt

The other storing vessel is called Bhiunt. This vessel is called “Bhyogacha” in local language. It has a rounded bottom. Its height is 2-3 feet. Its diameter is about 2-3 feet. Food grains, water wines etc. are stored in this vessel. This is a heavy vessel. Its weight is about 15-25 kg.(Picture no.15)

III. Potasi

This vessel is alcohol (i.e. chaang in newari language) making vessel. The size of vessel is same as Bhiunt. But this vessel has some holes on the bottom which let to get steam inside it when alcohol is prepared. The diameter of holes is about 5mm. The size of this vessel is larger to smaller. Its height is about 2-3 feet. Its diameter is about 1 foot in bottom and neck and 1.5 feet in middle. It has a rounded bottom. (Picture no.16)

IV. Hansi

Hansi is bigger form of Potasi. Its diameter and height is little more than Potasi. This vessel is used to make alcohol called “Raksi” in local language. Its diameter is about 1.5 feet and its height is about 2-3 feet. Its weight is about 15kg. This vessel also has holes in bottom which help to let steam get inside it when alcohol is made. The size of holes is 5 mm same as Potasi. (Picture no.13)

V. Gamala

Gamala is flowering vessel. This vessel is of different size and shapes. Usually, the height of this vessel is 1foot. This vessel is also has circular plane bottom with diameter of 6 inches to 10 inches from bottom to mouth. This vessel is

used to grow flower plants in the compounds of houses. The use of this vessel is to decorate houses. Nowadays, we can find Gamalas of different animal shaped such as elephants, horses, dogs, ducks, cocks etc. (Picture no.14)

VI. Makal

This vessel is called “maka” in Newari language. The height of this vessel is about 6 inches in bottom and 10 inches in mouth. This vessel is used to light fire for the purpose of heating environment or room in winter season. (Picture no.11)

VII. Handi

This vessel is used to dry maize, soybean, bean, pea, wheat, etc. this vessel is of height 1 foot. Its diameter is 1 foot in bottom and 6 inches to 7 inches in neck. It is not so heavy. Its weight is about 2 kg to 3 kg. It has wider bottom and narrower upper part. In most part of Nepal, dried grains like maize, beans, soyabean, wheat etc. are used as day time lunch. Most of grain foods are used in dried food. For the purpose of drying the foods, Handi is used. In the past, Handi was used to make beaten rice i.e. “Chiura”, too. But nowadays, beaten rice mill has already introduced in Bhaktapur and other towns. In rural areas, still Handi is used to dry rice for the purpose of making beaten rice. (Picture no.10)

VIII. Aari

This is a rounded shape vessel used during the preparation of wine. It is kept inside the Hansi during the preparation of alcohol called “Raksi”.in Newari language it is called “dwabo”. The prepared alcohol is collected in this vessel. (Picture no.12)

IX. Ceramics goods

This includes images and statues of different gods and goddesses, animals, people and different buildings. Besides these images and statues cup, plate, ashtray, candle stand, filter, Karuwa, tiles (to write some information in offices) are also included in ceramic goods. (Picture no.17 and 18)

Major Pottery Goods

Picture No. 10



Handi

Picture No. 11



Makal

Picture No. 12



Aari

Picture No. 13



Hansi

Picture No. 14



Gamala

Picture No. 15



Bhiunt and Ghampo

Picture No. 16



Potasi

Picture No. 17



Ceramic Goods
(Cup, Plate, Astray, Karuwa,
Candle stand, Panas)

Picture No. 18



Statues and Idols

Source: Field Survey, 2007

Table No. 11 : Production of major goods

S.N	Major goods	No of family	%
1	Gamala	10	32.25
2	Potasi	3	9.67
3	Aari	2	6.45
4	Handi	2	6.45
5	(Images, statues, models ceramics)	1	3.22
6	Hansi	3	9.67
7	Ghyampo	2	6.45
8	Makal	1	3.22
9	Bhiunt	5	16.12
10	Others	2	6.45
		31	99.95

Source: Field Survey, 2007

Above table shows the household percentage of major pottery vessels. 32.25% households produce Gamala, 9.67% produce Potasi, 6.45% produce Aari, 6.45% Handi, 3.22% produce images, startues and models, 9.67% produce Hansi, 6.45% Ghyampo, 3.22% Makal, 16.12% Bhiunt and 6.45% produce other pottery vessels. Production of various vessels is based on the demand of vessels according to the seasons.

CHAPTER - VII

WORKING PATTERN AND MARKETING

The pottery industry is totally established and operated by private sector and almost individually handled. The private entrepreneurs are primarily motivated by their own profit. The working patterns of pottery production are different in different households such as investment, labors, production, system of marketing and so on. And the system of marketing also varies from different households. Further, the working pattern differs by type of production strategy such as ceramics as compared to the local production.

7.1 Working Pattern

7.1.1 Reason for Working in Pottery Industry

It is found that most of potters in pottery industries work to earn money for their livelihood. They work hard because they have no other alternatives. They are not literate, they have no other skill so they are compelled to work in pottery industry. When they were asked about the reason for working in pottery industries. Mostly potters said that they were working in pottery industry to earn money for their livelihood in one hand and being traditional occupation on the other hand.

7.1.2 Time Period of Adopting

The potters had not adopted this occupation at the same time. Some has adopted it as being their traditional occupation whereas others have adopted in different time periods. Those who have been involved in this mostly reported as their traditional occupation.

Table No.12 : The time period of adopting pottery production

S.N	Years	No of potters	%
1	0-10	4	12.90
2	10-20	6	19.35
3	20-30	2	6.45
4	30-40	4	12.90
5	40-50	2	6.45
6	Above 50	13	41.93
		31	99.98

Source: Field Survey, 2007

According to the table, most of potters in the study area (41.93%) have adopted the occupation over 50 years that as it is their traditional occupation. Whereas the time of adaptation ranging from 0-1and 30-40& 20-30 and 40-50 are followed by equal number of households i.e. 12.90% and 6.45% respectively. Again 19.35% households have been adopting this since 10-20 years.

7.1.3 Working Time of Potters

This industry falls under cottage and small scale industry. Irrespective of the number of employees and the scale of investment, variation in working hours range from 1-3 hrs to 9-12 hrs per day. Most of potters worked 6-9 hrs per day in production.

Table No.13 : Daily working hours of workers in pottery production

S.N	No of working hours	No of family	%
1	1-3	4	12.90
2	3-6	11	35.48
3	6-9	14	45.16
4	9-12	2	6.45
	Total	31	99.99

Source: Field Survey 2007

The above table depicts the daily working hours of potters. It shows that 12.90% households work for 1-3 hours, 35.48% households work for 3-6 hrs, 45.16% for 6-9 hrs and 6.45% for 9-12 hrs per day. Their working hours changes according to the demand of vessels.

7.1.4 Participant Family Members

The whole family members of potters' family don't involve in this occupation. The number of participant members range from 2 to 6. Mostly, the participating members are two. And they include mostly the elderly people.

Table No.14 : No of family members participating in pottery production

S.N	No of family members participating	No of households	Total	%
1	1	-	-	-
2	2	19	38	61.29
3	3	6	18	19.35
4	4	2	8	6.45
5	5	-	-	-
6	6	1	6	3.22
7	More than 6	3	18	9.67
	Total	31	88	99.88

Source: Field Survey, 2007

The above table no.14 depicts that 61.29% households have two member participation, 19.35% have 3, 6.45% have 4, 3.22% have 6 and 9.67% have more than 6 member participation. None households have 1 and 5 member participation.

7.1.5 Labor Force Employment

Those potters who consider pottery production as their major occupation keep more labors. But whose secondary occupation is pottery production keep little number of labors and again the kept labors are only the local people.

Table No.15: Labor force employment in pottery production

S.N	No of workers	No of H.H	Total labors
1.	2	4	8
2.	3	5	15
3.	4	2	8
4.	5	5	25
5.	6	1	6
6.	7	2	14
7.	8	2	16
8.	0	6	0
	Total	31	96

Source: Field Survey, 2007

According to the table, maximum labors (5) are kept by 5 households and minimum labors (1) are kept by 4 households. And six households don't keep labors.

7.1.6 Capital Investment

Pottery is a small scale and cottage industry. So large capital investment is not necessary. The minimum investment of potters lies below Rs10000 and maximum investment lies between Rs90000 to 100000 in this study area.

Table No.16: Capital investment of pottery production

S.N	Capital	No of family	%
1	0-10000	20	64.51
2	10000-20000	3	9.67
3	20000-30000	1	3.22
4	30000-40000	2	6.45
5	40000-50000	1	3.22
6	50000-60000	2	6.45
7	60000-70000	-	-
8	70000-80000	-	-
9	80000-90000	-	-
10	90000-100000	2	6.45
		31	99.97

Source : Field Survey , 2007

The above table depicts the capital investment in pottery production. 64.51% households invest Rs0- 10000, 9.67% invest Rs10000-20000, Rs30000-40000, 50000-60000, 90000-100000 are invested by 6.45% households each and 20000-30000 and 40000-50000 are invested by 3.22% households each.

7.1.7 System of Wage Payment

The wage payment system is similar in almost all industries. In local area the labors are kept only for firing. And they are paid daily. The men are paid Rs250 and women are paid Rs150 daily. But in modern production the labors are kept for all works. The labors in local production are local people. But labors are paid monthly in ceramics industry. All labors don't get equal salary. The minimum salary is

Rs2000 and the maximum salary is Rs7000 per month. The labors in ceramic industry are local people (from Bode, Nagadesh, Balkumari, Bhaktapur) as well as the people from outside the valley specially from Dang and Janakpur.

7.1.8 Annual Income

The annual income of pottery industry operator isn't equal. It varies from Rs50000 to 500000.

Table No.17: Annual income of potters

S.N	Income(Rs.)	No of family	%
1	0-50000	5	16.12
2	50000-100000	7	22.58
3	100000-150000	4	12.90
4	150000-200000	3	9.67
5	200000-250000	2	6.45
6	250000-300000	2	6.45
7	300000-350000	2	6.45
8	350000-400000	3	9.67
9	400000-450000	1	3.22
10	450000-500000	2	6.45
		31	99.96

Source: Field Survey, 2007

According to table no.17 and the figure, the maximum annual income is Rs50000-100000 made by 22.58% households and minimum income is Rs400000-450000 made by 3.22% households. More annual income shown above is of ceramic industry. 4550000-100000 made by 22.58% households and minimum income is Rs 450000- 50tion.or 9-12 hrs per d

7.2. Marketing

7.2.1 Market of the Potteries

Kathmandu is the main market center of pottery goods. As being the capital city many people of different parts of the country have migrated in this city for various purposes. And they use various pottery goods like Ghampo, Makal, Gamala, Gagrow etc although they have purchased modern aluminium and steel goods. Most people migrate Kathmandu from different parts of the country and stay for temporary period. So they prefer to buy cheap materials for daily use. So they use

mostly pottery goods. The potters of Thimi sell their products in Kathmandu. During the time of Dashain they themselves move from place to place to sell their goods. Besides Kathmandu, Patan, Pharping, Thankot, Balaju, Indrayani, Matchhe Gaun, Budhhanilkantha etc are also marketing places of pottery goods. The potters also go to the villages near the Kathmandu like Godawari, Bungamat, Chapaghaun, Panauti, Banepa, Dhulikhel, Sanga, Barabishe and Chautara etc for marketing of their goods.

Some of their products are also sold in Narayanghat, Hetauda, Pokhara, Birgunj. In these places they take the potteries in trucks. Today with the development of transportation it has been very easy to carry the potteries to different places.

The market of potteries are not limited in national boundary but also the uncountable number of pottery goods are exported to foreign countries like Japan, Canada, America and so on. The pottery goods are exported to foreign countries with the help of Federation of Handicraft Association of Nepal located in Thapathali in Kathmandu and those goods are sold within the market of the country with the help of Maha Guthi and Dhukuti in Kupandole, Lalitpur.

7.2.2. Method of Selling

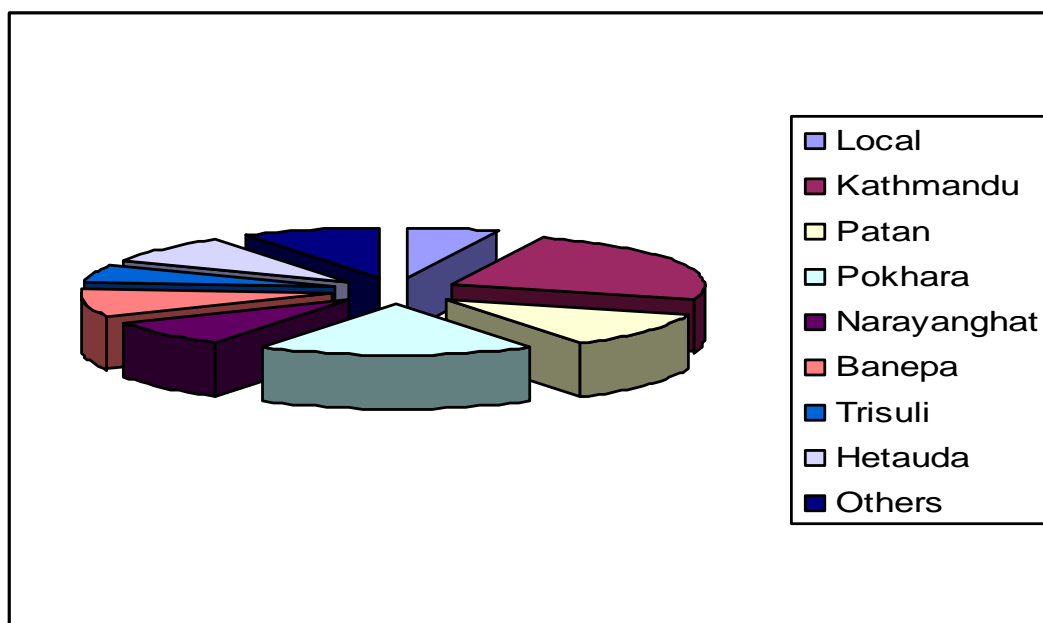
Before the advent of money, people of Madhyapur Thimi have the system of exchanging their pottery goods with some other goods. That is there was barter exchange between the goods. Potters used get vessels filled of food grains for their potteries. The exchange rate is determined by the bargaining power of buyer or seller. This happens after harvesting of various food crops like paddy, corn, barley, soyabean etc. Still today there is existence of this system among some potters. At recent time potteries are sold in cash.

Table No.18: Market situation of pottery industry

S.N	Selling places	No of potters	%
1	Local	2	6.45
2	Kathmandu	8	25.80
3	Patan	4	12.90
4	Pokhara	6	19.35
5	Narayanghat	3	9.67
6	Banepa	3	9.67
7	Trisuli	2	6.45
8	Hetauda	3	9.67
9	Others	3	9.67
		31	100

Source: Field Survey 2007

Figure No. 2



According to table no. 18 the marketing places are Kathmandu, Patan, Pokhara, Naranghat, Banepa, Trisuli and Hetauda. Among them Kathmandu is seen as the main marketing center where 25.80% households sell their products. Similarly 19.35% households sell in Pokhara, 12.90% sell in Patan. In Naranghat, Banepa, Hetauda and others, products are sold by 9.67% households each. And 6.45% households sell in local market and 6.45% in Trisuli too.

7.3 Impact of Modernization

During the ancient period, Bhaktapur is well known and famous for pottery making. But at present, the industry is limited to the certain places of Bhaktapur. Among those places, Chapacho of Madhyapur Thimi municipality of Bhaktapur is the one. The process of pottery making is in the process of extinction. The modern generation is not showing their interest in this occupation. They are more inclined towards the modern technical fields. Only the elder people are involved in this occupation and pottery making will totally be extinct with the death of these old people.

And the next impact is that with the development of science and technology, the vessels used in daily life are also modernized. Plastic, metal, and glass vessels which are durable, cheap and attractive in looks are brought in use by the people. Due to this, the clay vessels and pots are not found to be used by people.

At the same time, we can see the positive impacts of modernization. The ceramic industry is a great change in the traditional pottery making. Due to the development of ceramic industry, people are again interested to use the pottery goods in their daily use. The ceramic goods are quite attractive (use in decoration in hotel and restaurants) and are mostly exported to the foreign countries.

7.4. Some Case Studies

Case Study 1

Shanta Kumar Prajapati is a 37 years old young potter. He is the elder son of his family. He is also the father of two children. He has a brother too. He and his all family members including his brother and his children share the same kitchen. According to him, his father is involved in traditional type of pottery making but he took training when he was young from the GTZ project, Sanothimi, Bhaktapur. He got first position in training and got a modern kiln required for ceramic industry as a prize. He has established “Thimi Ceramic” at ward no. 10 of Madhyapur Thimi Municipality. According to him, he and his family members are involved in the occupation. They export the ceramic utensils in foreign countries like America, Canada, Japan. The major potteries produced are dinner plate, cup, astray, Gamala, image, statues.

Case study 2

Sagar Prajapati is 28 years old. He is a young potter. He is the only one son of his parents and also a father of a child. According to him, his father was a traditional potter but now he produces both traditional as well as modern potteries like Handi, Auga, Hansi, Cup, Gamala, Astray, Pen stand etc. He wanted to study but due to the poor economic condition he couldn't go to school. He was involved in this occupation since he was 12 years old. His family members help him in this occupation. He says that buyers from different town like Kathmandu, Trisuli, Banepa, Pokhara, Narayanghat etc themselves come to his home to purchase the goods.

Case study 3

Indra Kumar Prajapati is 68 years old. He has four sons. He has been following this occupation for 11 years. In the past he used to produce traditional goods like Gamala, Gagro, Ghanto, Lani, Potasi etc. But nowadays he only produces Gamala. He was not able to educate his all sons due to the poor economic condition. His three sons help him but his one son is a labor in ceramic industry. Buyers from different towns outside the valley come to his house to take the pottery vessels. According to him, due to the availability of transportation, they don't need to take the pottery vessels from place to place.

Case study 4

Ram Chandra Prajapati is 28 years old potter. His father has two sons and a daughter. He is the younger one. He is married and has a child. His father was a traditional potter. But he had established "Kala Ceramic Industry" 13 years ago. He had passed only SLC level. He says that he along with his family members and his elder brother are involved in this production. Further he has kept labors in his ceramic industry. Modern goods like cup, plate and decorating goods are produced in his industry. According to him export of goods is very less as compared to the past.

It is found that there was more demand of pottery vessels in the past but at present, the demand is less. Further due to poor economic condition they are obliged to get involve in this work from very early years. The young generation has shown their interest in modern pottery production (ceramics) than in traditional pottery production. The process of pottery production has been changed. The processes have become simple and easy nowadays. The ceramic goods are exported to foreign countries whereas the local goods are sold within the country.

CHAPTER - VIII

MAJOR PROBLEMS OF POTTERY PRODUCTION

No one and nothing are free of problems. The hindrances are arises in everything we do due to which our targets and aims become hard to fulfill. Similarly there are also some problems in pottery production which are creating the problems in this industry. Some of them are described below.

8.1 Problem of Raw Materials

The various raw materials like clay, sand, hay wood, chhwali, kerosene etc are essential for the pottery production. In the past potters get the clay without any cost from any farm. But nowadays they have to buy the clay. And clay is not available in a place all the time. They have to bring the clay from various places far from their place. So they have to pay for the transportation also. The next important raw material is water. Water is needed for many kinds of works in the pottery industry such as moulding clay, washing hands and feet and for having the bath too. In fact we cannot conduct pottery industry without water. Other raw materials are fuel materials such as straw, chhwali, wood, kerosene etc. Due to the high price of kerosene they are not able to produce the goods in cheaper rate. And straw, chhwali, wood are not available in sufficient amount as people are less involved in agriculture than the past.

8.2 Problem of Skilled Manpower

The other most important problem is the lack if skilled labor force. The people of old generation are being older and older. The young household members are uninterested to follow their ancestors' traditional craft of clay. They want to seek new jobs. The potters of new generation think that the pottery work is not respected work, furthermore, they think that it has very low benefits from the pottery work. Therefore, they are busy to seek for new jobs and to shift their traditional work. On the other hand, there is no facility of trainings of the pottery. Because of this reasons, arts of the old people is dying with themselves. Then the scarcity of skilled workers is increasing day by day.

8.3 Problem of Land

It is quite obvious that the pottery industry needs large area and of course the scarcity of enough space creates the problems. Because of this they don't have land to use for pottery industry. The area being residential area there is not enough space due to the rapid population growth. It is found that people are using the public areas turn by turn which will consume more time for the industry. They don't produce the goods all the time throughout the year due to lack of rooms for storage.

8.4 Problem of Capital

The next problem that the potters of Chapacho are facing is the lack of capital. The industry needs higher amount of capital investment. As all the potters are farmers they don't have sufficient capital stock. For forming the capital they need to save from their annual income. Because of poverty, they can't save enough money for it. The income they have made is just enough to fulfill their basic needs and for feasts and festivals. All the potters want to buy moulding machine. Hiring the machine is very uneasy for them. Sometimes they have to wait in long queue. Even after waiting they cannot get the machine in time. Because of this they cannot work with sufficient speed. Their income is very subsistence. The profit they annually earn is spent in fulfilling their basic needs. Because of this they are unable to invest the enough capital. They want to take loan for the industry from the banks but the interest rate is very high and the next thing is that most of them don't have any thing to submit to banks for loan.

8.5 Problem of Market

It is the most burning problem in pottery industry. The market is the most important aspect of any industry. If there is no market of any production, then it is meaningless to produce that thing. The main purpose of production of any things is to serve the consumers. If there are not any customers, then the production will go in vein. In the past, there were not substitutions for the pottery vessels. So there were great chances of flourishing the industry. But now in the 21st century people are in the most advanced period. Because of this, there are many substitutions for the earthen wares. Today, the market of the clay pots is overtaking by various vessels of glass, metal, and plastic. People of today feel shame to use the clay pots in the urban place as well as some rural area too. Therefore people are using the great deal of

plastic vessels instead of clay pots. They are not thinking that using the plastic vessels is the cause of environmental pollution in one hand and on the other hand it is inspiration to decline the traditional crafts of our ancestors. Market problem is not only this much. In fact, there is not any systematic market for the pottery production. Because of the lack of the systematic market of the earthen vessels, on one hand the consumers are not getting them in time and on other hand potters are not getting chance to sell their products in suitable price and the time.

8.6 Problem of Transportation

The transportation is also creating the problems in pottery production. The cost of petroleum materials is increasing in very rapid rate. Because of this the cost of transportation is also increasing in the same rate. So the cost of transportation is helping to double the cost of production of clay pots. Then potters are compelled to increase the price of the clay vessels. So the earthen vessels are more expensive than the metal, plastic and glass vessels. And this has created the difficulty to compete with other vessels.

8.7 Problem of Technology

Pottery industry is a traditional job. The potters themselves are rolling the part of producer, manager, labourer and technicians. So there is lack of scientific knowledge of the production of pottery vessels. Because of this, the pottery works remain back for many decades. In this advanced age, other industries of plastic, metal and glass vessel are able to conduct mass production. Because of this they can sell their products in cheaper price. So it is very difficult for hand conducted pottery industry with the other industries.

In this way this industry is facing many problems. Because of these problems the industry is notable to develop in proper way. So the concerned authority, potters and even consumers have to think about the development of pottery industry.

CHAPTER - IX

SUMMARY, CONCLUSION AND RECOMMENDATION

9.1 Summary

The present study on “pottery production in Madhyapur Thimi: A case study in Chapacho VDC” has tried to find out socio-economic status, impact of modernization, process of producing the major goods and main problems of pottery production. This study is mainly based on primary information and partly on secondary information. The selected two wards (8 and 10) have 31 sample households. Out of total sample, 16 are from ward no. 8 and 15 from ward no. 10.

They have adopted the occupation being their traditional occupation. Looking at the age structure most of them are found above 60 yrs and the percentage is found to be 13.59.

Most of the potters are found to be uneducated. And among males and females, females are uneducated mostly as there was not system of providing education to women. Due to illiteracy they are obliged to follow the profession. 26.98% are illiterate. Female illiteracy is 37.93% and male illiteracy is 17.64%.

The people of Chapacho follow different occupations like agriculture, pottery production, services, business and others. But most of them follow pottery production. About 72.99% annual income is earned from pottery production. Their expenditures are found to be on food, clothes, education, health, entertainment, feast and festivals and so on. Maximum expenditure is found to be on food (39.61%) and education (22.54%). According to them the maximum expenditure is due to the feast and festivals.

There are so many raw materials needed for this industry like clay, sand, water, land etc. first, the required raw materials are collected. Then the clay is prepared by moulding, then the wheels are thrown, the vessels are dried in the sunlight they are hammered and at last, they are fired and the vessels are prepared to send to the market. The pottery vessels can be prepared in any season but it cannot be made at the time of rainy season due to the lack of good work shops in the study area. The pottery vessels are classified as traditional (non- glaze) and modern (glaze)

vessels. The major goods of traditional type are Ghyampo, Hansi, Handi, Aari, Makal, Bhiunt and Potasi. And the major goods produced of modern type are cup, plate, candle stand, astray, statues, idols etc. Gamala is the mostly produced vessel among all. Among the total households 32.25% produce Gamala.

There are different sources of capital, clay as well as sand. Most household invest the capital from loan (32.25%) and others from agriculture, pottery itself, services, business and others. Clay is brought from different places like India, Dang, Jhaukhel, Bode, Harisiddhi, Chhaling, Jagati, Duwakot and Sirutar. Maximum i.e 25.8% household bring clay from Bode which is the neighbouring village and 22.58% bring from Harisiddhi. Similarly sand is brought from Siddhikali Pakha, Bode, Nilbarahi, Manohara and Saraswatikhel. 10 households among 31 bring sand from Siddhikali Pakha which is opposite to their residential area.

Small and cottage industry doesn't need fix amount of capital. So in this industry the capital invested ranges from Rs 10000 to RS 100000. 64.51% household invest capital below Rs 10000. No household is found which has invested capital between Rs 60000 to Rs 90000.

The adopting period of pottery production of potters is different. The adopting period above 50 yrs has been taken as traditional. And most of the potters lie in this category. 13 among 31 households have adopted it more than 50 yrs. Daily working hours of potters varies. There is not fixed working hours. The working hours of potters ranges from 1-3 hrs to 9-12 hrs. Most of them work from 6-9 hrs. Their working hours depend on the demand of the vessels. The family members participating in it are also not fixed. The number of family members participating ranges from 2 to more than 6. 19 households have 2 members participating. The potters who consider it as their primary occupation keep labors for the help but those who consider it as secondary don't keep the labors. Among the 31 households, only 25 households seem to keep the labors whereas the 6 households don't keep labors. The annual income from pottery production ranges from 0-50000 to 450000-500000. The lower annual income is of local production. And higher income is found to be of ceramic industry. The income of most of the potters (ie.7 households) ranges between Rs50000 to 100000. In local production the labors are kept only for firing and are they are paid daily. And labors are the local people. The males are provided Rs250 and females Rs150 per day. But in ceramics the labor are from different

places beside the local area. Number of labors is more in comparison to the local production and they are paid monthly. The minimum salary is Rs2000 and maximum is Rs7000 which depends upon the type of work.

The cost of clay is not same as it is brought from different places. The clay brought from near places cost less than the clay brought from farther places. 38.70% households bring the clay at price Rs0-600.

The main markets of pottery production are Kathmandu, Patan, Pokhara, Trisuli, Banepa, Hetauda, Narayanghat and local area itself. As there is more chances of breaking of local production they are not exported to foreign countries whereas the ceramic goods are exported to foreign countries like USA, Canada, etc. Mostly the goods i.e. 25.80% are sold in Kathmandu valley. The selling method differs to great extent in past and in present. During past there was barter system but now there is money exchange system.

There are so many problems that are seen in this industry. The major problems seen are problem of raw materials, problem of skilled manpower, problem of land, problem of technology, problem of capital, problem of market and problem of transportation. Clay can be brought free of cost in the past but at present it is difficult to bring the clay even by paying the amount. There weren't any substitutions for pottery vessels in the past. But at present there are so many substitutions which are durable as well as attractive than the pottery vessels. So people prefer to use those vessels. Due to which market demand of pottery vessels has been decreased. Again due to poor economic condition they are not able to use the modern machines needed for it which will consume less time and less number of labors to produce more products. And they are not able to give rapidity to their work. The pottery production needs large area which the potters don't possess. So they do their work in public land turn by turn. This consumes more time. So due to the lack of enough land they can't do their work in time. The young generation is inclined towards some other professions which has resulted in the lack of manpower in this field. Only the elders are seen to be involved in this work.

9.2 Conclusion

Pottery production and agriculture are main occupation of the local people of Chapacho VDC. Most of the Prajapati (Kumale) follow this occupation as it is their

traditional occupation. They can not do any other services and technical works as being illiterate. And again the young generation doesn't show interest in this occupation. So, mostly the elder people are found to be involved in this occupation. But they had shown interest in ceramics industry which is the modern form of local pottery production.

The Prajapatis are found in limited places inside and outside the valley. Inside valley they are found in Bhaktapur Municipality, Madhyapur Thimi Municipality and Sakhu(Kathmandu). And outside valley they are found in Janakpur, Salyan, Bhojpur, Surkhet, Dhanusha etc.

In the past, there are not any substitutions for the pottery vessels but at recent time there are so many substitutions vessels which have caused the decrease in demand of pottery vessels. But even there is decrease in demand of pottery vessels, the demand of Gamala (flower pots) is increasing day by day. Beside Gamala, the other major goods produced are Bhiunt, Potasi, Hansi, Handi, Makal, Ghyampo, Aari and so on. And the major ceramic goods include cup, plate, statues, idols, astray, candle stand, filter etc.

Most of the potters do the investment in this industry through the loan. And the income earned through this is just sufficient to fulfill their basic needs (food, clothes and shelter). Whereas the other needs and savings are done through other sources.

The working hours of the potters depend upon the demand of the vessels. On high demand they work for more hours even at night time. But if there is not demand of goods, they just work for 2-3 hrs a day. And mostly, from a particular family only two members (elder ones) are involved in this work. The work done by males and females are almost equal. The small difference is that the males do the work which is difficult in little extent.

Due to the poor economic condition the potters are not able to buy the machines like moulding machine, electric wheel etc needed for their work. So they have to depend on their hand for the works.

They are capable to make the potteries in large amount in any time. But due to the lack of space and storing room they make the potteries only in required

amount. The space they are using is the public place. So they are using it turn by turn.

The process of pottery making is more or less similar in past and present. Only difference we can find is the working pattern. Today's world is the world of science and technology. The works are done with ease with the help of various modern machines due to which the works are completed in limited time and with limited manpower.

The local vessels having more chance of breaking are not exported to foreign countries. They are sold inside the country. Whereas the ceramic goods are exported to foreign countries which has helped in the upliftment of economic status of the country. In the past people use to sell their potteries themselves visiting different places but the condition doesn't prevail at present time. The customers come to their home to buy the goods.

At present world of expensiveness, the raw materials, transportation cost and so many things needed for the pottery production have been expensive. So the price of the products has been increased and speed of progress of pottery production is very slow.

As nothing is free of problems, this industry too has to bear the problems like problem of raw materials, problem of transportation, problem of market, problem of skilled manpower, problem of technology, problem of land and so on.

9.3 Recommendation

1. There is a main problem of raw material in the pottery production. It is very difficult to get the clay. The land owners are refusing to provide the required clay for the potteries.
2. The technology of potter production should be modernized.
3. The low interest special loan should be provided to the potters for pottery production.
4. The government should participate in the pottery industry. If it can be done it will be helpful to the potter to get achievement in the industry.
5. There are not moulding machines in every households of the study area. The government should provide machines in affordable price.

6. The new generation is not interested in the profession. They think that the pottery production is not respectful profession. Therefore, they are seeking for new alternatives. It is time to change the negative attitude toward the pottery production. For the purpose, we can organize the exhibition and different advertisement on the pottery production.
7. Training should be provided to the potters to modernize the production.
8. The land used by the potters is not enough.
9. Transportation cost is very high for potters. Even the transportation of vessels is very risky. Because the vessel can be broken in the time of transportation. Therefore, transportation cost for the potteries should be provided in the cheaper cost.
10. Systematic marketing centers of pottery products should be established. This will help the potters as well as the customers.
11. The pollution brought by it during the firing process is very harmful for the people living near by it. So the firing process should be carried out far from the residential areas.
12. A little mistake during firing process may cause the breaking of all the potteries. So the potters should be provided the knowledge about firing in details so as to prevent the destruction.
13. The broken vessels which are wasted produced from firing should be processed for recycling. The recycling process will reuse the wasted ones.

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ANNEX - 1

QUESTIONNAIRE

1. Brief detail of the respondents

Name-

Age-

Sex-

Ward No-

Educational status-literate/illiterate

2. Respondent's family:

Caste	Age	Sex	Education	Main occupation	Religion

3. Number of potters family under different age group

Sex/Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	Above60
Male													
Female													

4. How long do you have been following this work?

5. How many members participate in this work?

6. What type of raw materials do you need?

7. Do you use any tools for making goods?

Yes/no. If yes what are they?

8. From where do you bring clay and sand? How much does it cost? And by which means of transportation do you bring the clay?
9. How many hours a potter is engaged in this work per day?
10. What types of goods are produced?
11. What is the main season of pottery making?
12. How much capital do you invest and what is the source of the capital that you have invested?
13. Do you need more laborers?
Yes/ No. If yes from where do they come? How many do you need? and how much do you pay to them?
14. How much it does it take to make the goods and what are the processes involved in it?
15. How much area do you need for this occupation?
16. Do you have to face any problem while carrying on with this occupation? If yes what are they?
17. How much do you earn per year?
18. Where do you sell the goods and what means of transportation do you use?
19. Is the demand of the goods increasing or decreasing?
21. Are you satisfied with this job?
22. What do you do with the income that you have earned from this occupation?
23. Are your children interested in this job and do they want to give continuity to this occupation? Yes/No