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CONSTRAINS AND POTENTIALITY OF SCALING UP POTTERY PRODUCTION  
UNITS IN BANGLADESH: A Comparative Case Study of Micro Enterprises of Dhaka and  
Cottage Industries in Tangail



June 2014

**CONSTRAINS AND POTENTIALITY OF SCALING UP POTTERY  
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**A Comparative Case Study of Micro Enterprises of Dhaka and Cottage Industries in  
Tangail**

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**June 2014**

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**Trondheim, Norway, 2014**

## **Dedication**

To Syed Mafizur Rahman, my father, whose legacy has been guiding me all along, and to my family for their support and encouragement

## **Acknowledgement**

At first I would like to thank Almighty God for conveying me this far; this would never have been possible without your guidance.

My sincere thanks go to *Prof. Haakon Lein* who has guided the research and without His insights it would have been hard path to come up to this far. I would also like to thank earnestly the Department of Geography as a whole for bringing me the opportunity to do the research.

I would also like to thank all the hard working potters in Bangladesh, who have provided their precious time to respond my questions. They are the focal point of this research. My special thanks go to *Sri Ratan Chandra Pal*, From Kaguzipara, Dhamrai, who have helped me to understand the whole context of pottery production and marketing system. The Heartfelt thanks go to *Mohammad Hossain Bhuiyan* who has helped me in various ways regarding this thesis.

I also acknowledge the Norwegian Government through the quota program for providing the financial support that has made it possible of doing the research.

At last and not the least I would like to thank my family for their active support, enthusiasm and sacrifice.

## **Abstract**

Pottery products with its both localized and worldwide recognized market demand, location advantages in natural and human capital and environmentally green features have offered the potential to be a main stream micro/cottage industry for Bangladesh.

Worldwide promotion of Micro, Small, or Medium Enterprises (MSMEs) have acknowledged as prospective option to develop industrial sectors in developing economy. Beck et.al. (2005) have shown a strong positive link between MSMEs development and GDP per Capita growth. Even in Bangladesh major share of the development is focused considering the MSME and pottery being a traditional cottage/micro industry has a part to play in it.

But the existing pottery industry have been facing problems with the demand as other substitutes (Plastic and metallic ware) becoming popular. But pottery has distinct demand as artistic object among the broader urban based markets. It is comparatively hard for cottage industries to reach the large markets with the lower production and marketing capacity. Thus a scaling up of the production and marketing has potential to reach larger market with greater demand.

This research aims to identify the capital base and the respective constraints in different level of pottery production unit and with it an overview about potentiality the pottery industries for further scaling up have been developed. To do so the research consider three study areas considering cottage based pottery industries and the micro industries. The research have followed the qualitative method of research by taking sustainable livelihood as the central theoretical base and have used SLF as the tool to collect, organize information. A SWOT analysis has further expanded the understanding towards the relative strengths and weaknesses of different pottery production unit for scaling up.

The research also delineates possible strategies and line of action to that could be done to minimize constrains and maximize the potentiality. Both the production type have found potential for further scaling up with some structural adjustment in the production and marketing system.

## **Acronyms**

CBO	Community Based Organization
DFID	Department of International Development
FYP	Fiscal Year Plan
GBM	the Ganges-Brahmaputra-Meghna river basin
GDP	Gross Domestic Product
HDI	Human Development Index
MEPP	Micro Enterprise for Pottery Production
MSME	Micro, Small and Medium Enterprises
SME	Small and Medium Enterprises
SLF	Sustainable Livelihood Framework
SRDI	Soil Recourse Development Institute of Bangladesh
SWOT	Strengths, Weaknesses, Opportunity and Threats
TCPU	Traditional Cottage Based Pottery Production Unit
UNDP	United Nations Development Programme

## Table of Contents

Dedication .....	III
Acknowledgement .....	IV
Abstract .....	V
Acronyms .....	VI
Table of Contents .....	VII
List of Figures .....	IX
List of Pictures .....	IX
List of Table .....	X
List of Maps .....	X
List of Charts.....	XI

### CHAPTER ONE: AN OVERVIEW OF THE POTTERY AS THE PROBLEM STATEMENT OF THE RESEARCH

---

1.1. Introduction.....	1
1.2. Background of the study .....	3
1.3. Objectives and research questions .....	5
1.4. Scope of the study .....	6
1.5. Epistemology and Positioning.....	6
1.6. Outline of the study.....	7
1.7. Study flow chart.....	8

### CHAPTER TWO: COUNTRY PROFILE - BANGLADESH

---

2.1. Introduction.....	10
2.2. Soil Resources of Bangladesh.....	12
2.3. Macro Economic Growth of Bangladesh: an Overview.....	14
2.4. Micro, Small, or Medium Enterprise (MSME): Bangladesh Perspective .....	17
2.5. Conclusion .....	19

### CHAPTER THREE: RESEARCH DESIGN

---

3.1. Introduction.....	20
3.2. Conceptualization and Theoretical Justification .....	20
3.2.1. Qualitative Methodology.....	20
3.2.2. Selected study area.....	22
3.3. Defining Data Requirement and Method of Data Collection.....	23
3.3.1. Secondary data collection.....	24
3.3.2. Primary Survey Design and Method of Data Collection .....	25
3.3.3. Data interpretation and analysis .....	28
3.4. Viability and reliability of the study .....	29
3.5. Conclusion .....	30

### CHAPTER FOUR: USEFUL LITERATURE REVIEWS AND THEORETICAL FRAMEWORK OF THE RESEARCH

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4.1. Introduction.....	31
4.2. Literature review .....	31
4.2.1. Pottery in Bangladesh.....	31
4.2.2. Pottery: A Cultural Heritage of Bangladesh.....	32
4.2.3. Potters as a Community.....	36

4.3.	Theoretical Framework .....	38
4.3.1.	Introduction .....	38
4.3.2.	Some Key Concepts .....	38
4.3.3.	Meta-narrative: Alternative Development.....	39
4.3.4.	Sustainable Livelihood Approach .....	41
4.3.5.	The SL Approach Framework.....	44
4.4.	Conclusion .....	49

#### CHAPTER FIVE: OVERVIEW AND DESCRIPTION OF THE STUDY AREA

---

5.1.	Introduction.....	50
5.2.	Livelihood Assets/ Capital Stocks for Pottery Production .....	50
5.2.1.	Geological Location, Accessibility .....	50
5.2.2.	Natural Capital .....	51
5.2.3.	Human Capital .....	53
5.2.4.	Social Capital .....	58
5.2.5.	Financial Assets .....	59
5.3.	Pottery Production and Marketing Process in Different Group .....	62
5.4.	Problems and possible solutions: Community perspective .....	69
5.5.	Conclusion .....	71

#### CHAPTER SIX: CONSTRAINTS AND POTENTIALITIES OF SCALING UP POTTERY PRODUCTION UNITS

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6.1.	Introduction.....	72
6.2.	An overview of SWOT analysis .....	72
6.3.	SWOT analysis of TCPU and MEPP.....	74
6.3.1.	Strategies for the best utilization of Opportunity-Strength for TCPU .....	74
6.3.2.	Strategies for overcome weakness utilizing the opportunity for TCPU Development.....	78
6.3.3.	Strategies for avoiding the threat utilizing the strength for TCPU Development.....	78
6.3.4.	Strategies for avoiding threat and minimizing weaknesses for TCPU Development.....	79
6.3.5.	Strategies for the best utilization of Opportunity-Strength for MEPP.....	79
6.3.6.	Strategies for overcome weakness utilizing the opportunity for MEPP Development.....	83
6.3.7.	Strategies for avoiding the threat utilizing the strength for MEPP Development .....	83
6.3.8.	Strategies for avoiding threat and minimizing weaknesses for MEPP Development.....	83
6.4.	Recommendation for further actions.....	84
6.4.1.	Recommendation for TCPU .....	84
6.4.2.	Recommendation for MEPP.....	86
6.5.	Conclusion .....	88

#### CHAPTER SEVEN: CONCLUDING REMARK

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References.....	90
Appendix 01: Questionnaire Guide.....	96
Appendix 02: Age and Sex Ratios in the Study Area .....	99
Appendix 03: Different Occupational Group within TCPU and MEPP.....	100
Appendix 04: Different Occupational Group within TCPU and MEPP.....	101
Appendix 05: Academic Status within TCPU and MEPP Community.....	102
Appendix 06: Income expenditure information in MEPP and TCPU .....	103
Appendix 07: Key Informant References in different study area.....	105



## List of Figures

<b>Figure 01:</b> Poverty Irradiation and Growth Nexus within 1990s in Bangladesh .....	3
<b>Figure 02:</b> Study flow chart showing different phase of the study.....	9
<b>Figure 03:</b> Clusters sampling to select the respondent of the Interview Guide for the research.	26
<b>Figure 04:</b> Different Type of Livelihood Asset According to UNDP (1999) .....	43
<b>Figure 05:</b> Holistic understanding towards Sustainable Livelihood.....	44
<b>Figure 06:</b> DFID Livelihood Framework.....	45
<b>Figure 07:</b> SLF as the tool to structure the research.....	48
<b>Figure 08:</b> Pottery production process in TCPU.....	58
<b>Figure 09:</b> Pottery production process in MEPP.....	59
<b>Figure 10:</b> SWOT Analysis Diagram	73
<b>Figure 11:</b> Constrains in TCPU and required action for scaling up. ....	85
<b>Figure 12:</b> Constrains in MEPP and required action for scaling up.....	87

## List of Pictures

<b>Picture 01:</b> <i>NBPW found in Mahashan</i> .....	34
<b>Picture 02:</b> <i>Rouletted Ware found in Mahashan</i> .....	34
<b>Pictures 03:</b> Potter community In Bangladesh.....	37
<b>Picture 04:</b> Satellite picture of the landscape of Pal Para Village, Mirzapur.....	52
<b>Picture 05:</b> Satellite picture of the landscape of Khamar Para, Savar.....	52
<b>Picture 06:</b> Satellite picture of the landscape of Kaguzipara, Dhamrai.....	52
<b>Pictures 07:</b> Processing of Clay for pottery production.....	65
<b>Pictures 08:</b> Use of different type of Potter's Wheel.....	66
<b>Pictures 09:</b> Sun drying and designing and storing of pottery goods.....	67
<b>Pictures 10:</b> Different size of kiln used in the study area.....	67
<b>Picture 11:</b> Potters as street vendor.....	69

### **List of Table**

<b>Table 01:</b> Size and Growth Rate of Manufacturing Sector (At constant prices 1995-96)	15
<b>Table 02:</b> Method of the Study; Qualitative vs. Quantitative.....	22
<b>Table 03:</b> General characteristics of the selected sites.....	23
<b>Table 04:</b> Pottery as a cultural heritage of Bangladesh.....	35
<b>Table 05:</b> Contrast between TCPU and MEPP considering Human capital.....	54
<b>Table 05.a:</b> Contrast between TCPU and MEPP considering human capital.....	57
<b>Table 06:</b> Income and expenditure pattern of TCPU and MEPP.....	60
<b>Table 07:</b> Income, Investment and Benefit-Cost Ratio of TCPU and MEPP.....	61
<b>Table 08:</b> Labor absorption in clay processing in TCPU and MEPP.....	64
<b>Table 09:</b> Labor absorption in clay processing in TCPU and MEPP.....	66
<b>Table 10:</b> Labor absorption in clay processing in TCPU and MEPP.....	68
<b>Table 11:</b> Community perspective towards different problems and their possible solution	69
<b>Table 12:</b> Relative Strengths, weaknesses, Opportunities and Threats of TCPU .....	75
<b>Table 13:</b> Relative Strategies to overcome the weakness and threats utilizing the strength and opportunities in TCPU	76
<b>Table 14:</b> Relative strengths, weaknesses, Opportunities and Threats of MEPP.....	80
<b>Table 15:</b> Relative Strategies to overcome the weakness and threats utilizing the..... strength and opportunities in MEPP	81

### **List of Maps**

<b>Map 01:</b> Map of Bangladesh with cultural heritage sites with pottery.....	11
<b>Map 02:</b> General soil map of Bangladesh showing soil diversity.....	13
<b>Map 03:</b> Study areas with surrounding market areas.....	24

### **List of Charts**

<b>Chart 01:</b> Sector wise GDP share in Bangladesh economy (From 1941 - 2011).....	14
<b>Chart 02:</b> Size and growth rate of manufacturing sector in Bangladesh.....	15
<b>Chart 03:</b> Percentage share of different manufacturing unit among MSME.....	18
<b>Chart 04:</b> MSME Contribution to GDP by Unit size.....	18
<b>Chart 05:</b> Different age group of TCPU.....	53
<b>Chart 06:</b> Different age group of MEPP.....	53
<b>Chart 07:</b> Shifting of profession from pottery to others.....	55
<b>Chart 08:</b> Academic status in different group of the study area .....	56
<b>Chart 09:</b> Illiteracy within Female group of MEPP.....	56
<b>Chart 10:</b> Illiteracy within Female group of TCPU.....	56

## CHAPTER ONE: AN OVERVIEW OF THE POTTERY AS THE PROBLEM STATEMENT OF THE RESEARCH

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### 1.1. Introduction

Earth wares have both localized and worldwide recognized market demand and it has the potential to be a main stream micro/cottage industry for Bangladesh. This industry can help local level community development by providing an option for alternative livelihood development among the poor segment of the people and address poverty. Bangladesh has many locational advantages like Quality Clay, Water Resource, Clan Based Traditional Skilled Worker etc., for pottery production. This industry is more green and environmental friendly and mostly engages under privilege part of the society. Any development over this occupational category has a potentiality to address micro level poverty irradiation process.

Pottery is one of the most significant cultural heritages of Bangladesh. Century to century pottery products have been bringing forth the historical events, culture and values of the community to the next generation. Geologically Bangladesh has less access to the stone but very rich in soil diversity. Because of this most of the historical structures in Bangladesh are built using the earth. It is evident in different ancient temple, like Kantazir Temple (Kantazir Mondir) in Dinajpur, Bangladesh, decorated with terracotta artwork. Most of the historical places of Bangladesh like Paharpur Monastery of Rajshahi, *Mahastangarah Monastery* of Bogra and *Moinamoti monastery* of Comilla have many historical pottery objects from 3rd century up to 13th century which is recognized as valuable historical artifact and considered as the inimitable example of the pottery. Thus pottery plays an impotent role as the cultural heritage in the socio-cultural history of the Bangladesh.

Worldwide promotion of Micro, Small, or Medium Enterprise (MSME) recognized as prospective option for the developing economy to absorb vast manpower including the poor people. Using the sample of 45 countries, Beck et.al. (2005) in their paper, “*SMEs, Growth, and Poverty states that Cross-Country Evidence*”, have shown a strong positive link between MSMEs development and GDP per Capita growth. Harvie (2004) have claimed that, “*SMEs play a larger structural role in Taiwan, China, Japan, Thailand and Vietnam where they contribute over 70 percent of employment.*” in the 90s. Bangladesh,

in the Sixth Five Year Plan (6th FYP) projects an acceleration of GDP growth (from 6.1 per cent in FY 2010 to 8.0 per cent in FY2015) through excelling the performance of industrial sector, particularly of the manufacturing sector (*Bangladesh Planning Commission. 2011a*). MSMEs comprise over 99 per cent of all industrial units In Bangladesh (*The SME Foundation 2006*). Thus major share of the development in Bangladesh is focused considering the MSME and pottery being a traditional cottage/micro industry has a part to play in it.

The demand for the pottery goods threatened now days with the *Substitute Goods*<sup>1</sup> like Plastic ware, Metallic ware or Ceramic ware. Usually earth ware is fragile more than the ceramic and the plastic ware. But it is degradable and more environmental friendly. Clay made different things like flower vase, sculpture, toys are very famous in the big markets as for their artistic value. Most of the small scale *Traditional Cottage based Production Unit* (further mentioned as *TCPU*) cannot take the benefit of that demand because of the distance and transportation costs. While it is hard for the individual or family based production unit to reach to the broader market, comparatively big production unit like *Micro Enterprise for Pottery Production* (further mentioned as *MEPP*) has more potentiality to reach the markets. So scaling up the production and marketing has potential to reach more to the larger market with greater demand.

According to Dr. Osmani, “*Relative expansion of larger non-farm enterprises, allowing for greater absorption of labor into salaried employment, has played a key role in bringing poverty down in the 1990s*” in Bangladesh (*Osmani, 2005*). Same as the 1990s, another potential effect of scaling up pottery production units expected to address poverty within of the stakeholder engaged in the pottery production and marketing process.

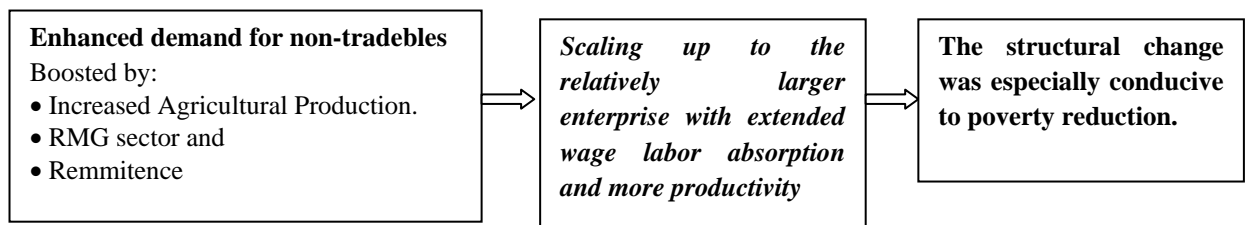
This research aims to identify what are the resource base and the constraints in different level of pottery production unit and how potential the pottery is for further scaling up from *Traditional Cottage Based Production Unit (TCPU)* to *Micro Enterprise for Pottery Production (MEPP)*.

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<sup>1</sup> *Substitute Goods* are goods which, as a result of changed conditions, may replace each other in use (or consumption) (Nicholson, Walter 1998).

## 1.2. Background of the study

Bangladesh experience unique economic growth in the 1990s. The reason behind this growth in 1990s in Bangladesh is the central to conceptualize the research question. For the last three decades the economy of Bangladesh keeps a constant positive growth. Bangladesh have experienced GDP Growth rate 5 percent or above in the last decade (The World Bank, 2013). Within 1991 to 2011 the percentage of population under poverty reduces from 56.6 percent to 31.5 percent (Bangladesh Planning Commission 2011b). In the 1990s, industries and services sector, by having the share about 41 percent each contributed the most to the incremental growth (Osmani et. al. 2003) in GDP. This eventually contributed to the poverty eradication process of Bangladesh within 1990s.



**Figure01:** Poverty Irradiation and Growth Nexus within 1990s in Bangladesh

Enhanced demand for non-tradable plays as central role bringing down the poverty in 1990s. In 1990s, the demand for the non-tradeables boosted by increased agricultural production, ready-made garment (RMG) sector and increasing amount of remittances received by Bangladesh. The hasten increase in non-tradable has an effect on the wage and employment system of the poor people particularly the rural poor. As *the acceleration in the rate of poverty reduction that was observed in the 1990s was essentially a rural phenomenon* (Osmani et al., 2003). One affect of enhanced demand for non-tradable was the growth over the average size of the farms. *Although there are no systematic surveys of this sector to confirm exactly how its structure has changed over time, this inference can be made by piecing together a number of different kinds of evidence, drawn from labor force surveys, household expenditure surveys, agricultural censuses, and so on* (Mahmud, 2004).

Scaling up of non-farm enterprises in the rural areas has reflective upshot in the income and wage of the rural poor. In 1980s the rural poor, landless laborers shifted to

agricultural to alternative employment in rural non-farm sector for livelihood. With relatively smaller size and less demand non-farm sector does not profitable much. But in 1990s the situation changed when the average size of the small enterprise scale up in a level that it demand more wage labor with productive stance. Thus the poor rural workers found an increasing opportunity to secure wage employment in the 1990s. *Analysis of the 'Household Expenditure Survey of 2000' shows that salaried employment in the rural non-farm sector was much more rewarding for the poor than any other mode of employment* (Osmani et al., 2003). Therefore, the scaling up of non-farm enterprises open the opportunity for more inclusion of labor into remunerated employment which is one of the main causes of poverty reduction in 1990s.

On June 03, 2005, *The Daily Star*, one of the most popular English daily newspaper in Bangladesh published a report, *'Village potters go global'* which during the literature review noticed by the researcher. The report depicts how a small village named Murarikati in Kalaroa upazila, Satkhira, Bangladesh, started to export tiles for the Italian market and how this change the total livelihood pattern and poverty situation of the area. To begin with the potters of the village were the same as the TCPU and share the same problems. As stated by Bimal Pal, a potter of Murarikati village, *'The demand for clay utensils has diminished over time due to the availability of cheap, handy alternatives made of aluminum or glass or plastic'* (*The Daily Star 2005*). But with the locational advantages like quality clay, skilled potter this village was spotted by one Italian entrepreneur named Rafeli. He started *"Karra Export-Import Private Company Limited"* and began to produce and export tiles to Italy in 2003. This boomed the pottery industry there establishing 50 Micro, Small, or Middle Enterprise developments within 2005 engaging around 3,000 potters in this process. As Swapon Pal, a potter in the locality, exclaimed, *"By making exportable tiles, they are now able to maintain their families and are dreaming the dream of living"* (*The Daily Star 2005*).

These experience shows that, reaching up to a broader market with greater demand can serve as the stimuli to boost up the local traditional cottage based production unit to potential MSME development. Scaling up of the production units has more possibility to reach the broader market. Even with systematic linkage to international market the pottery goods could be a potential importing good and serve as the key to community development.

### 1.3. Objectives and research questions

The research aimed to explore the resource base of two types of pottery production unit; *Traditional Cottage Based Production Unit (TCPU)* and *Micro Enterprise for Pottery Production (MEPP)*, and uncover the constraints and further potentialities of scaling up.

The specific objectives to meet this are twofold-

- I. *Assess the Resource base of the pottery groups; Traditional Cottage Based Production Unit (TCPU) and Micro Enterprise for Pottery Production (MEPP), in the study areas.*

Using *Sustainable Livelihood Framework (SLF)*, the *livelihood assets* of the potter community in the study area would be identified through primary survey. This research also reflects on the *vulnerability context* of the study areas.

- II. *Compare to uncover the relative constraints and recognize the further potentialities of scaling up of production and marketing.*

Considering the TCPU and MEPP, the collected information would be compared and relative advantage and constraints of these two types of units would be recognized. Then based on the analysis it would be determined whether it TCPU has the potential to scale up to MEPP.

To satisfy the objective the research would consider the following research questions to be satisfied:

- I. *What are the relative advantage and constrains of the different production unit i.e. TCPU and MEPP?*
- II. *Whether are there any potentialities to further scaling up the pottery production within the existing resource base and situation in the study area?*



#### **1.4. Scope of the study**

Generally potters are a large community by definition. It engages the entire working class who is engaged in earthenware, stoneware and porcelain production. To specify the scope, this research only considers the portion of the potter engages in production of earthenware and stoneware. The pottery production units of the study area have been divided as TCPU and MEPP. TCPU has mostly engaged in production of earthenware while MEPP has engaged in production of stoneware and earthenware both. This research only considers these two types of production units and related potter community as targeted population.

The potter community throughout Bangladesh is diverse with their production procedure and marketing system. The research considers three specific potter communities as the study area. The study will not reflect on the overall potter community of Bangladesh.

To satisfy the information needed for the research, *Sustainable Livelihood Approach (SLA) Framework* has been used as a conceptual base for data collection. Yet it considers alternative development as the theoretical base for community development. Based on these SLA framework and Alternative Development concept would be the central of the theoretical framework. Main focus of the study has been given to the analytical representation of the resource base and potentialities of different pottery production units of the study area using the SWOT analysis model. Thus more focus has been given to the existing livelihood assets.

The research has reflected on the potter community as a general category and emphasis on the subgroup like women, children have not given in this research. Some insight about the different subgroup has emerges through the discussion, but the primary focus has been the potter community as a whole.

#### **1.5. Epistemology and Positioning**

Epistemology is commonly known as '*the theory of knowledge*' as it query about knowledge, how to attain it, and the extent it is relevant to any given situation. It focused on the philosophical analysis of the nature and relativity of knowledge. It '*deals with*

*questions concerning the nature, scope, and sources of knowledge’ (Rose 2005) and justifies the research with the positioning of the researcher.*

This study mostly uses epistemic externalist view which *‘claims that issues of knowledge and/or justification depend exclusively or primarily on such factors as how the belief was caused or how reliable is the faculty or mechanism by which the subject came to hold the belief’ (Rose 2005).* Information collected from the targeted groups with their own perspective and view plays a central role to satisfy the objectives. Thus most of the part of the study will be conducted based on the empirical data collected directly from the potter community. As the study will be based on the empirical data and based on real information, the study will give some knowledge about the research questions.

### **1.6. Outline of the study**

This report has assembled with six separate chapters following the general guideline which eventually form the basic understanding towards the topic under the study and have incorporated the data, information, reflections from different sources to satisfy the objective here within.

With delineating the problem statement chapter one has commenced the research topic for this report. A general introduction to the pottery industry in Bangladesh perspective has noted here with the background of the study. The specific goal and objective have been fixed to guide the research. The scope of the research has also depicted here with the positioning of the research. At last the chapter has given an illustrative outline about the general structure of the research work.

Chapter two has introduced Bangladesh as study area. An overview of the country has been portrayed including the logical relation with the research under study. The description of physiological aspect as well as the economic over view especially in the *Micro, Small, Medium Enterprises (MSMEs)* has built the basic understanding regarding the prospect and potential of the pottery industries.

Chapter three has constructed the outline of the research and the specific research design has been selected. It delineates the depiction of the methodological approach, study area

selection, data collection methods, tools and procedure to satisfy the research objectives. This chapter has also assessed the methodological debates and has constructed the justification for the qualitative approach.

Chapter four has given a basic introduction to the pottery and the potters in Bangladesh. The chapter has developed a general understanding of the importance and potentiality pottery has had both in economic term and as a cultural heritage. The chapter also has linked the research with Alternative Development, Sustainable Livelihood and Sustainable Livelihood Framework (SLF) which has been the central theoretical perspective for this research. The chapter has also defined some related topic for the research work. Overall, it has depicted the major theoretical and analytical perspective that has been guiding the study.

Chapter five has given a descriptive view towards the study area and has been acted as the information bank for the further analysis. The primary data collected from the study area has been enlisted in this section. The chapter has depicted the resource base for the production and marketing process of pottery and an overview of the potter and pottery work in different types of unit in the study area.

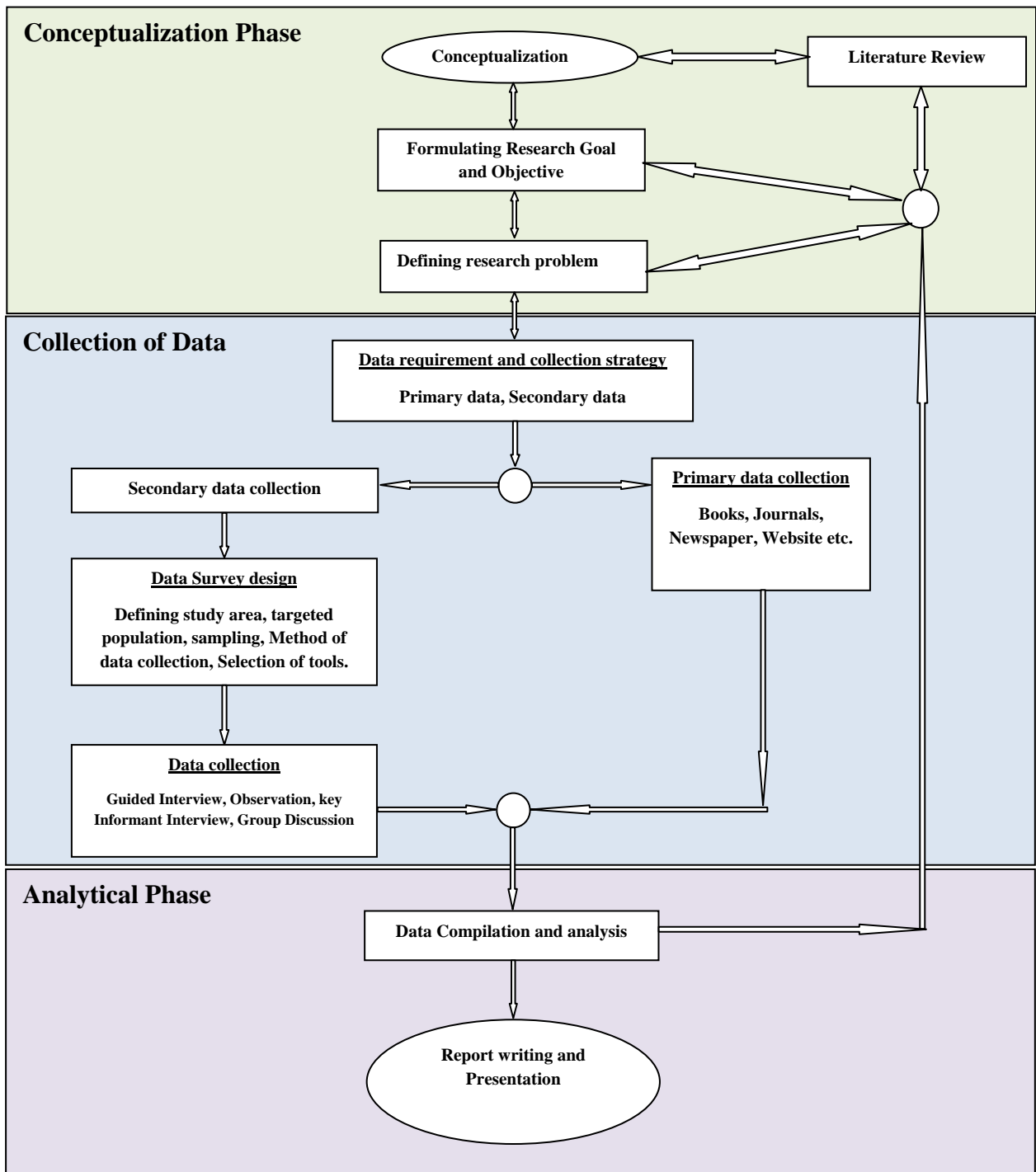
Chapters six have presented the main findings regarding the research. It has given the overview about the different problems of the study area and possible solution. These chapters have also enlisted the responsible authority that could bring some change in the present problem structures.

Eight Seven has concluded the report by giving some personal insight of the researcher focusing on the upcoming challenge in the study area.

### **1.7. Study flow chart.**

As shown in the Figure 02 this research broadly follow three different phase; initially conceptualization of problem statement with specific objectives and scope have been established and linked with theoretical framework; then, to satisfy the problem statement the required data and method of data collection have been defined with proper

justification; at last, the collected data and information have analyzed to satisfy the research objective.



**Figure 02:** Study flow chart showing different phase of the study

### 2.1. Introduction

Bangladesh, known as '*the land of river*', is located in *Southern Asia*, and have the border on the north, west and east by India, on the southeast by Myanmar and on the south Bay of Bengal. The country positioned between 20 degree 34' and 26 degree 38' North latitude and 88 degree 01' and 92 degree 42' East longitude, with a total land area 147,570 sq. km. The administrative name of the country is '***People's Republic of Bangladesh***' and governed by parliamentary democracy. Administratively Bangladesh have been divided into 7 Divisions, 64 Districts, 7 City Corporations, 308 Municipalities, 481 Upazillas, 599 Thanas and 4498 Unions. (BBS 2011)

Crisscrossed by the potent rivers like the Padma, the Meghna, the Jamuna, the Teesta, the Brahmaputra, the Surma, the Meghna and the Karnaphuli and 230 of their tributaries and distributaries, Bangladesh have been blessed with about 24140 kilometers of total length river. All those rivers have continuously enriched the soil by depositing heavy silts during the rainy season and have made Bangladesh as the biggest river deltas in the world. Being a river delta the landscape of the country has been comprised of fertile alluvial plains with very rich soil diversity. Over 85 percent of Bangladesh is flat, alluvial and plain which contains high quality clay for earth work. This country promises many locational advantages for the industry like pottery with its abundant natural resources. (BBS 2011)

Bangladesh, with a population of approximately 166.23 million (World Fact Book 2014), is one of the most densely populated countries in the world. About 62 percent of this population resides with in 15 to 64 years of age group and within the most productive age group (age 25 to 54) there is about 38 percent of the population comprising the availability of the huge manpower for the industrial labor absorption. The majority of the population is Muslim (around 89.5 percent) following by Hindu (9.6 percent) and the remaining percentage a mixture of Christian, Buddhist and other casts. Most of the Potters in Bangladesh are from Hindu family, as traditionally pottery business was maintained by the sub clan in Hindus named '***Pal***' in Bangladesh. Thus as stated earlier, potter community mostly engages the minority and any development over this has

a potentiality to address micro level poverty irradiation process and also empower minor segment of the population.



Source: World Fact Book 2014

**Map 01:** Map of Bangladesh with cultural heritage sites with pottery

Bangladesh plays an important role in international and regional forums like the Commonwealth, the United Nations, the South Asian Association for Regional Cooperation (SAARC), and the Organization of Islamic Conference (OIC). The Bangladesh Constitution commits to ensure equal rights of all citizens. The Government recognizes the issues and challenges and is working to ensure that the most marginalized and vulnerable groups – women, minorities, children and others – are not left out of the country's development agenda.

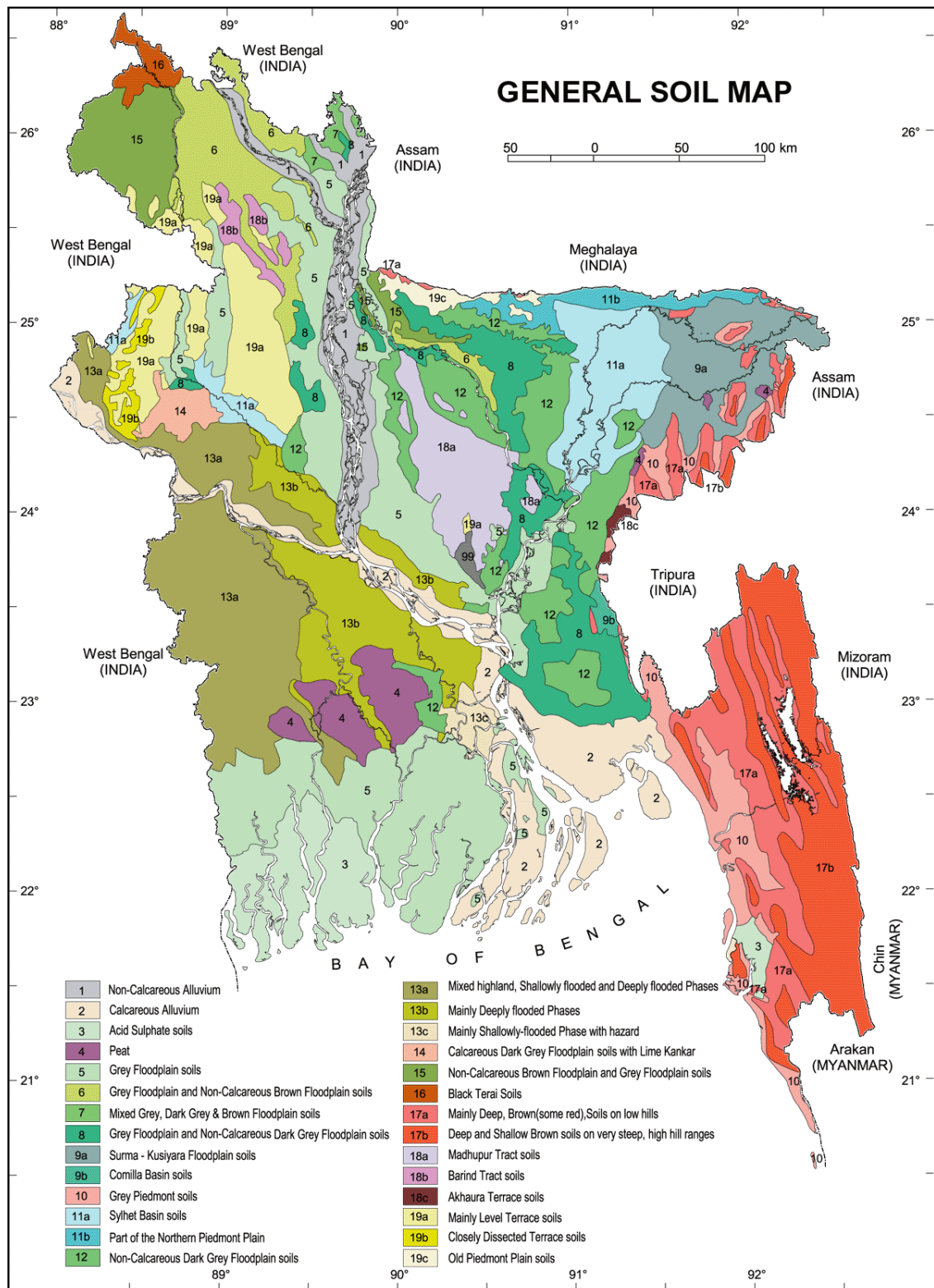
## **2.2. Soil Resources of Bangladesh**

Bangladesh is the biggest river delta created by the influence of three mighty rivers Ganges, Brahmaputra and Meghna. It is situated in the foot of *The Ganges-Brahmaputra-Meghna* (GBM) river basin. The GBM river basin is a trans-boundary river basin with a total area of just over 1.7 million km<sup>2</sup>, distributed between India (64 percent), China (18 percent), Nepal (9 percent), Bangladesh (7 percent) and Bhutan (3 percent) (Aquastat, 2014). These three rivers connect only a few hundred kilometres upstream and jointly fall into the Bay of Bengal. The *GBM river system* is the third largest freshwater outlet to the oceans of the world (Chowdhury and Ward, 2004 on Aquastat, 2014). The system serves as drain for 1.7 million km<sup>2</sup> river basin with rich soil diversities and carry snowmelt water from the Himalayas as well as the runoff water of rain from the whole basin. Thus the sediment collected from different part of the basin have been settled and eventually made Bangladesh. About 80 percent soils of Bangladesh have been formed from these sediments known as floodplains.

The flood plains are generally recognized as active, young, and old floodplain landscapes by the soil survey. *Active floodplains* prevails in the land within and adjacent to the main rivers, where shifting through deposit and erode sediments is still active during the annual floods. It is rich in clay content and very fertile for agriculture. The young and old floodplains are almost stable land crossed by tributary or distributaries of the main rivers channels that vary from active to moribund delta.

Earlier in 1970s, the *Soil Recourse Development Institute (SRDI)* identified about 500 soil series in Bangladesh. Later on late 1980s these soil series have been classified in the

revised FAO-UNESCO soil map of Bangladesh (FAO/UNDP, 1986). The map categories a total of 21 general soil type for Bangladesh.



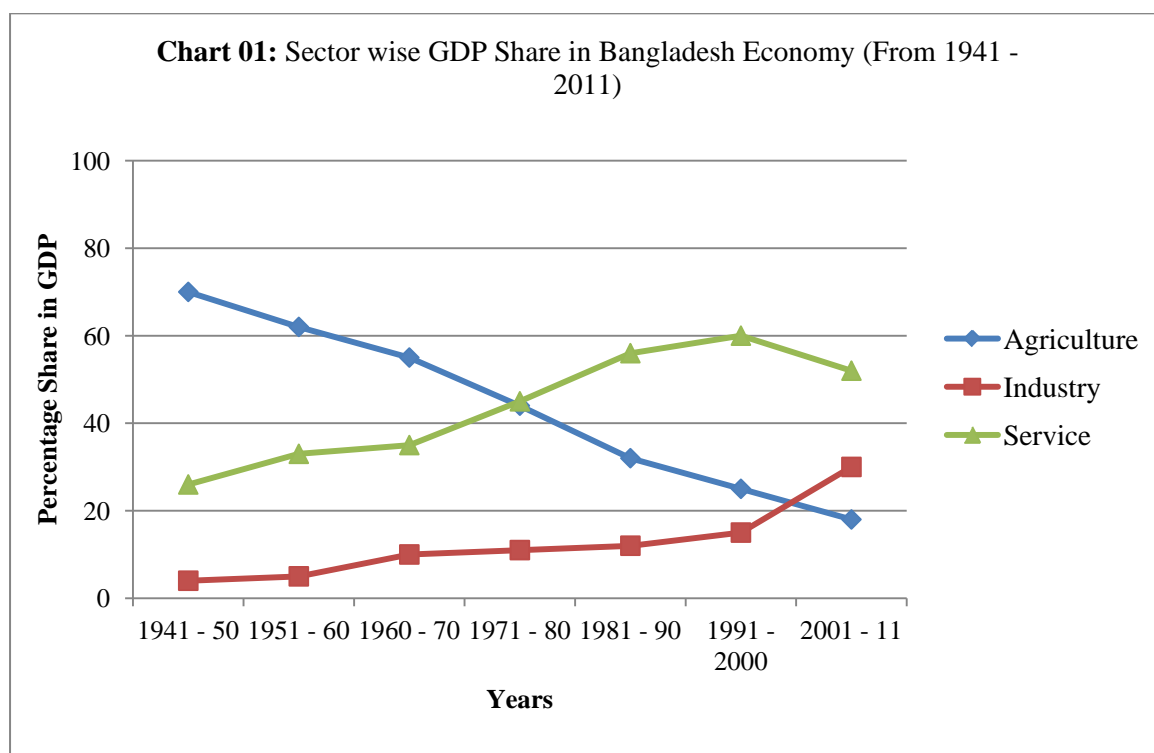
Source: World Fact Book 2014

**Map 02:** General soil map of Bangladesh showing soil diversity.



### 2.3. Macro Economic Growth of Bangladesh: an Overview

Bangladesh has made significant economic progress over the past decade. Annual GDP growth averages more than 6 percent in recent years and its per capita income was doubling in less than 30 years (BBS 2011). The economy is in transition from an agrarian to industrial base as share of the industrial production is growing continuously in the national GDP. Regardless of the global economic crisis and downbeat growth in world trade in FY 2011-12, the economy of Bangladesh dawdling slightly from 6.7 percent in FY 2010-11 to 6.32 percent. It is mostly because of the substantial growth in industry and service sector. The national poverty headcount has declined from 56.6 per cent in 1991-1992 to 31.5 per cent in 2010-2011, while the extreme poverty rate declined from 41 to 17.6 per cent over the same period (BBS 2013). Considering Human Development Index (HDI) value, for a period from 1980 to 2012, it gradually increases from 0.303 to 0.515, placing the country in the low human development category, and 146th out of 187 countries and territories (UNDP 2012).



Source: World Fact Book, CIA and BBS 2011

The involvement of industry sector to Bangladesh economy has been continuously increasing in a swift rate. According to BBS (2011) contribution of industry in GDP

grows from 30.38 percent in FY 2010-11 to 31.26 percent in FY 2011-12. Industry sector considers different subsectors like mining, manufacturing, construction, electricity, gas and water supply. Among these sub-sectors, the contribution of the manufacturing sector is the highest (*Table 01*).

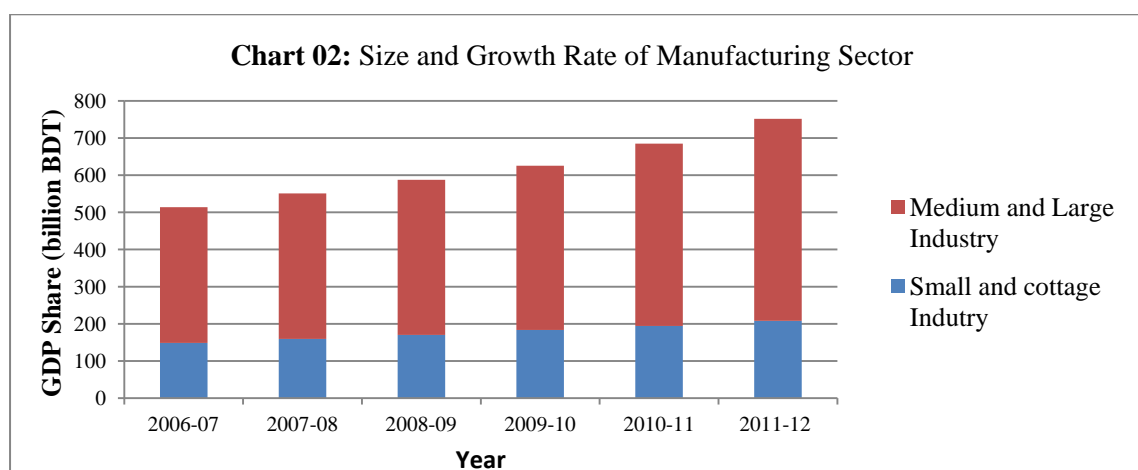
**Table 01:** Size and Growth Rate of Manufacturing Sector (At constant prices 1995-96)

Type of Industry		2006-07	2007-08	2008-09	2009-10	2010-11	2011-12 (Provisional)
Small and Cottage	Amount	148.65	159.20	170.18	183.40	194.12	208.06
	Growth %	9.69	7.10	6.90	7.77	5.84	7.18
Medium and Large	Amount	365.07	391.57	417.35	442.29	490.70	543.59
	Growth %	9.74	7.26	6.58	5.98	10.94	10.78
Total	Amount	513.72	550.77	587.54	625.70	684.82	751.64
	Growth %	9.72	7.21	6.68	6.50	9.45	9.76

Source: BBS 2011

Note: All value given in BDT in billion.

According to provisional estimate of BBS (2011-2012), the share of manufacturing sector in GDP has been estimated at 19.01 percent in FY 2011-12 experiencing a growth rate about 9.76 percent. The size and growth performance of the manufacturing sector in the last five year is given below.



Source: BBS 2011

Although Bangladesh is predominantly an agricultural country a large number of large-scale industries based on both indigenous and imported raw materials have been set up.

Among them readymade garments, cotton textile, pharmaceuticals, fertilizer, wood product, iron and steel, ceramic, cement, and plastic product, chemical are important ones. In the chart 02 the increasing amount of GDP share in medium and large industries are given. Though the cottage industries share relatively less but play a significant role in employment generation. Considering the cottage industries handlooms, carpet-making, shoe-making, coir, bamboo and cane products, earthenware, brass and bell metal products, bidi and cheroots, small tools and implements, ornaments are significant. Despite of being a traditional cottage industry, pottery is not significantly contributive in the economy.

The industrial policy 2010 of Bangladesh views an incorporated approach of economic growth through rapid industrialization. It considers the determination to achieve millennium development goals by 2015. The policy visions to improve poverty situation by creating additional employment opportunities; it aims to create job for one man per family. The industrial policy aims to increase in the industry sector's share in GDP to 40 percent by 2021 and encompasses the Vision 2021 as a perspective plan to uplift the economy of Bangladesh to middle income and technology based country by 2021 by setting some target. Some of the targets are:

- ❖ Attain 8 percent annual growth rate and eventually increased it up to 10 percent with in 2017 and sustain the growth further.
- ❖ By 2015 living accommodation for entire population of Bangladesh.
- ❖ By the year 2021 contribution of agriculture, industry and service sector in GDP will stand at 15, 40 and 45 percent respectively in place of 22, 28 and 50 percent as at present.
- ❖ By the year 2021 the unemployment reduced to 15 percent from 40 percent in 2010.
- ❖ By the year 2021 labor in agriculture comes down to 30% from 48% at 2010.
- ❖ By the year 2021 labor in industry is 25% from 16% and in service 45% from 36% at present.

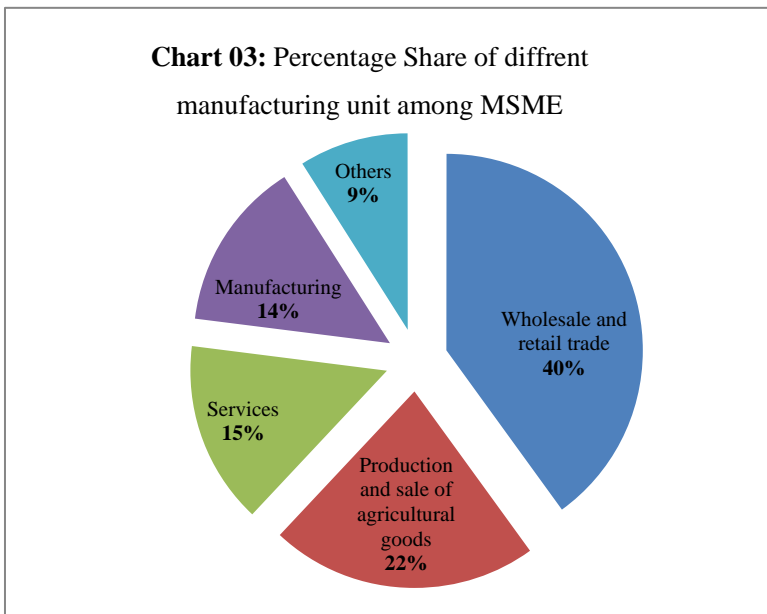
The imperative and fundamental objectives of the *Industrial Policy 2010* comprise establishment of productive employment, focusing women engagement in the productive

industrialization process and poverty alleviation. The policy views that labor-intensive industries are more suited to satisfy the imperatives than capital-intensive ones. Thus *Micro, Small and Medium Enterprises (MSME)* promotion is one of the lucrative options to serve the mentioned target. According to Beck et. al. (2005), MSME has positive linkage with the GDP growth and Harvie (2004) claimed in 1990s SME contribute 70 percent employment in the economy of countries like Taiwan, China, Japan, Thailand and Vietnam. *MSMEs*, by producing exportable surpluses of commodities and simultaneously satisfying home demands, are making significant input to the economy of Bangladesh. This sector is a prospective sector in terms of local value additions to the commodity and mass consumption of labor with employment opportunities. In order to ensure rapid industrialization, the Government aims to promote the SMEs alongside the large-scale industries.

#### **2.4. Micro, Small, or Medium Enterprise (MSME): Bangladesh Perspective**

Though there is no elaborate survey in Bangladesh for the total picture, some initiative has been taken to figure out the contribution of the MSME in the economy of Bangladesh. According to SME foundation survey (2006-07), MSMEs comprise over 99 per cent of all industrial units, contributing over 85 per cent of industrial employment. About 90 per cent of total employment and more than 55 per cent of total manufacturing value added originated from MSMEs. SME Foundation Survey (2006-07) defines that, enterprises are considered as micro (having less than 10 workers), small (10 to 49 workers) and medium (50 to 99 workers) enterprises considering the labor absorb capacity. According to BISCIC (2009), small and cottage/micro industries accounted for 90.91 per cent of total industrial establishments in 2008\2009. There are approximately 66000 small industry units and 611,612 cottage industry units, providing employment for 3.5 million people. If handlooms are considered then cottage industry units alone shoots up above 700,000 units. More than three quarters of the household income in both urban and rural areas in Bangladesh are provided by the MSMEs (Rahman 2007).

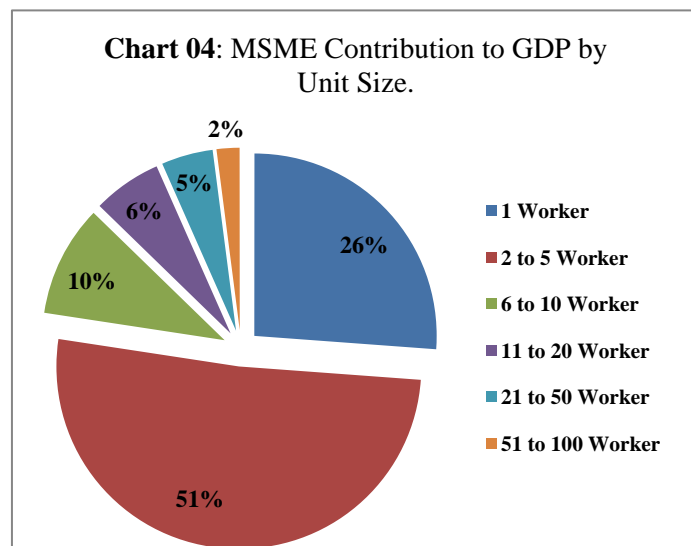
The *International Consultancy Group (ICG)* of the UK, in partnership with the *Micro Industries Development Assistance and Services (MIDAS)*, conducted in 2003 the ‘*National Private Sector Survey of Enterprises*’ in Bangladesh which depicts a basic understanding about the contribution of the MSME in the economy.



According to the survey, the industrial structure of MSMEs consisted of 'Wholesale and retail trade and repairs', 'Production and sale of agricultural goods', 'Services', and 'Manufacturing' contributing 40 percent, 22 percent, 15 percent, 14 percent accordingly (Chart 03). Thus the survey

brought out the huge unexploited potential for expansion in manufacture and production.

The survey also depicts the importance of micro/cottage industries in Bangladesh economy. As survey found out MSMEs contributed 25 per cent of the GDP of Bangladesh in 2003; among these, enterprises employing 2-5 workers are credited for having contributed 51 percent, followed by 26 percent by those having only one worker and 10 per cent by those having 6-10 workers (Chart 04). Thus micro enterprises (enterprise employing 1 to 10 workers) solely contributed around 87 percent to the GDP in 2003.



Pottery being a traditional a cottage industry also has the pros and cons that MSME share in Bangladesh. Despite of problems MSME faces or the limited output to the GDP comparing the labor absorption, MSME plays a very important role in The Bangladesh

economy. One of the potential cottage based industry is the pottery industry which also have the potential to grow further in Bangladesh.

## **2.5. Conclusion**

Pottery, as a traditional cottage industry, has also contributed in the economy of Bangladesh. Pottery industry is known as for its intensive labor absorption including the female labor. As Bangladesh government visions is to develop industrial sectors through MSME, pottery with its traditional clan based skill labor and abundant natural capital can play an important role in the MSME development in Bangladesh.

### 3.1. Introduction

*Methodology is “a coherent set of rules and procedures which can be used to investigate a phenomenon or situation” (Kitchin et. al. 2000).* It is the general orientation that dictates how research is done. From the beginning of a research work methodology built the logical framework for conducting the research. *Methods are* specific research techniques used to study a topic (Silverman 2001). Both the concept of the methodology and the methods are very important in the research design. In this section the methodological framework of the research would be delineated. The choice of research methods and their justification have also been established. It also outlines the links between Conceptual Framework and the Theoretical Framework of the research.

According to Figure 02 this research mostly follow three different phases: initially the conceptualization phase, then, data collection phase at last, Analytical phase.

### 3.2. Conceptualization and Theoretical Justification

The phase started with formulating the problem statement of the research with relevant theoretical framework. By breaking down the problem statement the research then establishes the objective of the study and devises research problems. With intensive literature review this phase has given better understanding of nature and scope of the research which eventually leads to select the method of the study. It also defines the epistemic justification and positioning of the researcher. This part formulates the rational of the research.

#### 3.2.1. Qualitative Methodology

*“...choosing a research method is not about deciding right from wrong, truth from falsehood; instead the goal should be to select an approach that is suitable for the task at hand” (Marvasti 2004).*

During the conceptual phase it was become clear that this research would be more empirical, concerning about the depth of the information rather than focusing on the quantity of the samples. According to Kvale (1996), qualitative research is sensitive to the human situation and involves an empathetic dialogue with the subjects studied. It would

collect the insight of the potters and the other stakeholders regarding their personal life, profession, and struggle from their own perspectives. In this case Qualitative methodology suits the requirement of the study perfectly.

*Flick (1998)* urges that qualitative research is oriented towards analyzing concrete cases in their temporal and local particularity, and starting from the people's expressions and activities in their local contexts (*Hay 2000*). This research focuses on the stakeholders engaged on ***Traditional Cottage Based Production Unit (TCPU)*** and ***Micro Enterprise for Pottery Production (MEPP)***, in their local setting with their personal feedback. It constructs a holistic idea of the apprehensive community by analyzing the words and detailed view of the informants in their natural setting. Thus the flexibility offered by the qualitative methodology towards collecting in-depth empirical data regarding the targeted population is central to this research design.

Moreover, qualitative methodology is characterized by an in-depth, intensive approach rather than an extensive or numerical approach. This study had a small but more focused sampling which allows a researcher to bring out abundant information with less formality (*Kitchin et al. 2000*). The study also depends on “*the strength of a qualitative study that aims to explore a problem or describe a setting, a process, a social group, or a pattern of interaction will rest with its validity*” (*Marshall et al. 1999*). The study will focused on the pottery production units and the potters, their activities, and define the resource base within the concerned community.

Thus the study has been following Qualitative<sup>2</sup> method of social research. This method is selected as it will satisfy the research context most over Quantitative<sup>3</sup> method of research (Table 02).

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<sup>2</sup> ***Qualitative research*** provides detailed description and analysis of the quality, or the substance, of the human experience. (*Marvasti, 2004*)

<sup>3</sup> ***Quantitative research*** involves the use of methodological techniques that represent the human experience in numerical categories, sometimes referred to as statistics. (*Marvasti, 2004*)



**Table 02:** Method of the Study; Qualitative vs. Quantitative.

Research Activity	Indicator	Remark
<b>Sampling Technique</b>	Cluster Sampling (Interview guide), Theoretical or Purposive Sampling (FGD participants and Key Informants)	Mostly Qualitative with open ended question and checklist. A section of the Interview guide will be in quantitative manner though.
<b>Data Collection Tools</b>	Interview Guide, Personal Observation, Group Discussion, Key informant Interview.	Most of the data collection tools use checklist without formative questionnaire ensuring the flexibility in data collection which is the qualitative in nature.
<b>Data Analysis</b>	Analysis focused on context-specific meanings and effect relationships and social practices.	Qualitative in nature
<b>Conceptual Framework</b>	Theoretical Framework and methods are inseparable.	Qualitative in nature.

### 3.2.2. Selected study area

Primarily Bangladesh was chosen as per the prerequisite of the Scholarship Agreement between the researcher and Department of Geography, NTNU. As Bangladesh is the home country of the researcher it is advantageous in many ways for the research work. The researcher has not had to face the language barrier and the cultural barrier has been also in the minimum level.

As the objective of the study have been to identify the resource base and the constraints of pottery production units and have an idea whether pottery have had further potential for scaling up, location of research has chosen considering the objective in the consideration. This research have taken into consider three study areas mostly sharing the one large market. It has also considered the availability of the pottery production units. Two sites have been chosen focusing *Micro Enterprise for Pottery Production (MEPP)*. And one site has been selected from the rural country side considering *Traditional Cottage Based Production Unit (TCPU)*.

Three different sites i.e. *Kaguzipara* (Dhamrai Upazila, Gazipur), *Khamar Para* (Ward 3, Savar Upazila, Dhaka) and *Pal Para* (Mirzapur Upazila, Tangail), have been chosen from

the central part of Bangladesh. General location characteristics of the chosen sites have been delineated in Table 02.

**Table 03:** General characteristics of the selected sites

Criteria		Kaguzipara, Dhamrai	Khamar Bari, Savar	Pal Para, Mirzapur
Type of settlement		Urban	Rural	Rural
Accessibility		Good	Moderate	Moderate
Accessibility to market		Good	Moderate	Moderate
Type of production unit		MEPP	MEPP	TCPU
Unit Surveyed	Guided Interview	5	10	19
	Group discussion	1	1	1
	Key informant Interview	2	2	2
	Production units	4	8	15
Access to resource		Moderate	Good	Good

Source: Field Visit, 2012

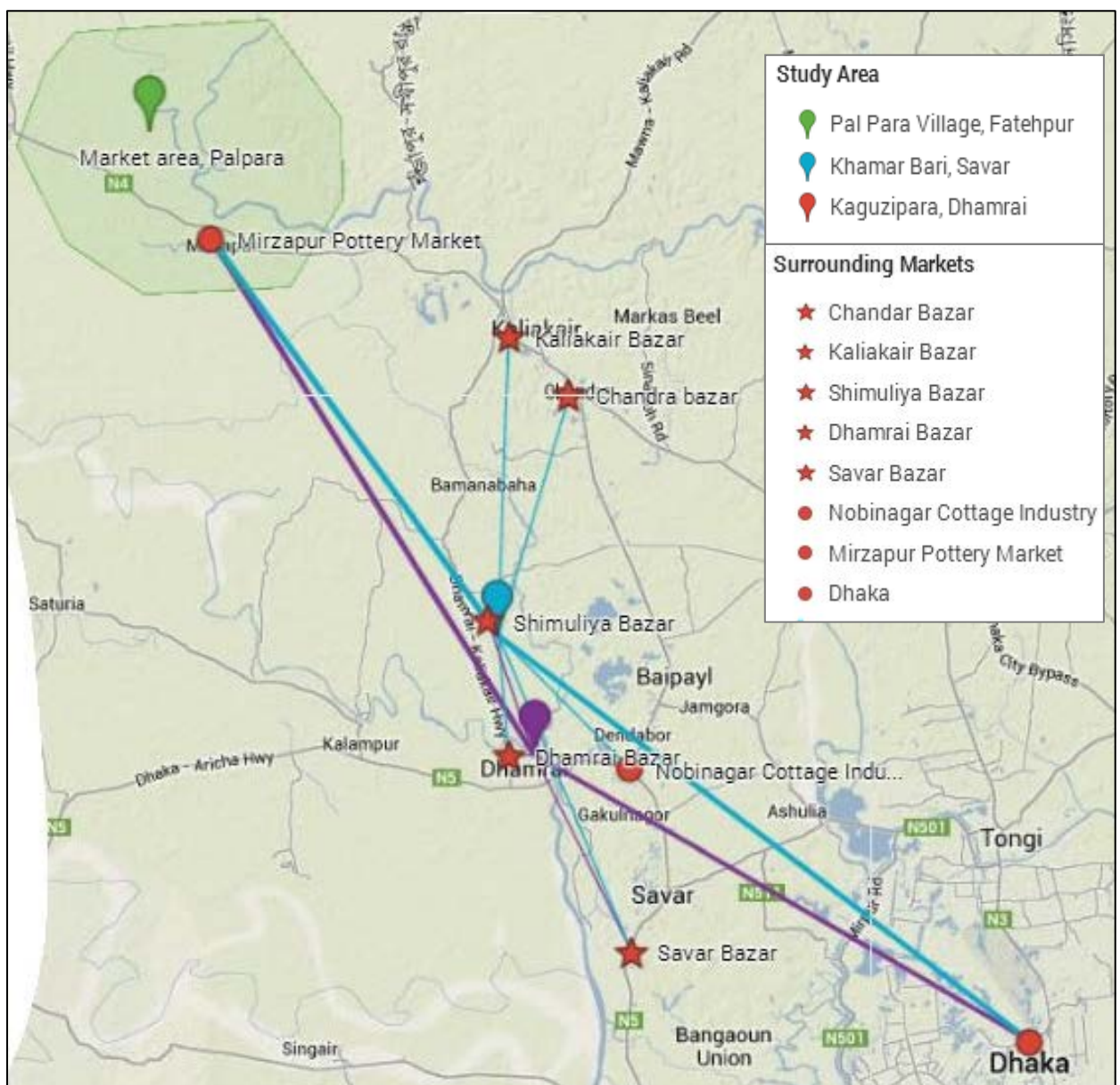
To satisfy the data requirement from each area primary data have been collected using different data collection tools. In Kaguzipara, Dhamrai, 5 guided interview, one Group discussion, 2 key informant interview and 4 pottery production unit survey have been taken. In Khamar bari, Savar nad Pal Para, Mirzapur these number have been 10 and 19, one and one, 2 and 2, 8 and 15 individuals and units respectively.

### 3.3. Defining Data Requirement and Method of Data Collection

After specifying the study area, detailed data requirement to satisfy the objective of the study have been carefully noted. The data have collected broadly from primary sources and also from the secondary sources.

### 3.3.1. Secondary data collection

Through the research period especially in the conceptual phase verity of secondary information sources have been investigated for collection of necessary data and information. While collecting the data from the secondary sources special emphasis was given to ensure the viability and the reliability of both the sources and the information itself. Some of the information like policies, legislative documents, is collected from the local authority of Bangladesh and from the Bangladesh Bureau of Statistics. The other sources of the secondary data are Journal papers, Reports, handouts, lift lets, brochure, Newspaper, Maps, websites over internets.



**Map 03:** Study areas with surrounding market areas.

### 3.3.2. Primary Survey Design and Method of Data Collection

To satisfy the data requirement, this research also collects data and information directly from the targeted population. As the study area has been selected at earlier phase of the research, a primary idea about the study area was established through secondary data and reconnaissance survey. After that the scope of the data collection is defined and the survey design is prepared pinpointing the targeted population, sampling technique, method of data collection. The survey had been from June 15, 2012 to August 15, 2012. During this time secondary data from the different offices and governmental bodies also collected.

#### *Defining the targeted population*

In a broader sense this research primarily focused on the potter community. There are different types of potters who are specialize with the production different goods, like, utensils, flower Vase, sculptures, toys, bank, brick, tiles etc. This research only considers the potter community engaged with producing utensils and the flower vase, flower pot. This group is selected as it is the most common type of the potters who are engaged in the process.

The research considers two types of pottery production unit i.e. TCPU and MEPP. ***Traditional Cottage Based Production Unit (TCPU)*** has been defined as the most common type cottage based pottery production unit engaging a family. The family usually inherited it as family business and practiced through traditional system of pottery production. On the other hand, ***Micro Enterprise for Pottery Production (MEPP)*** is a unit where several potter families engaged worker having comparatively larger production and marketing capability.

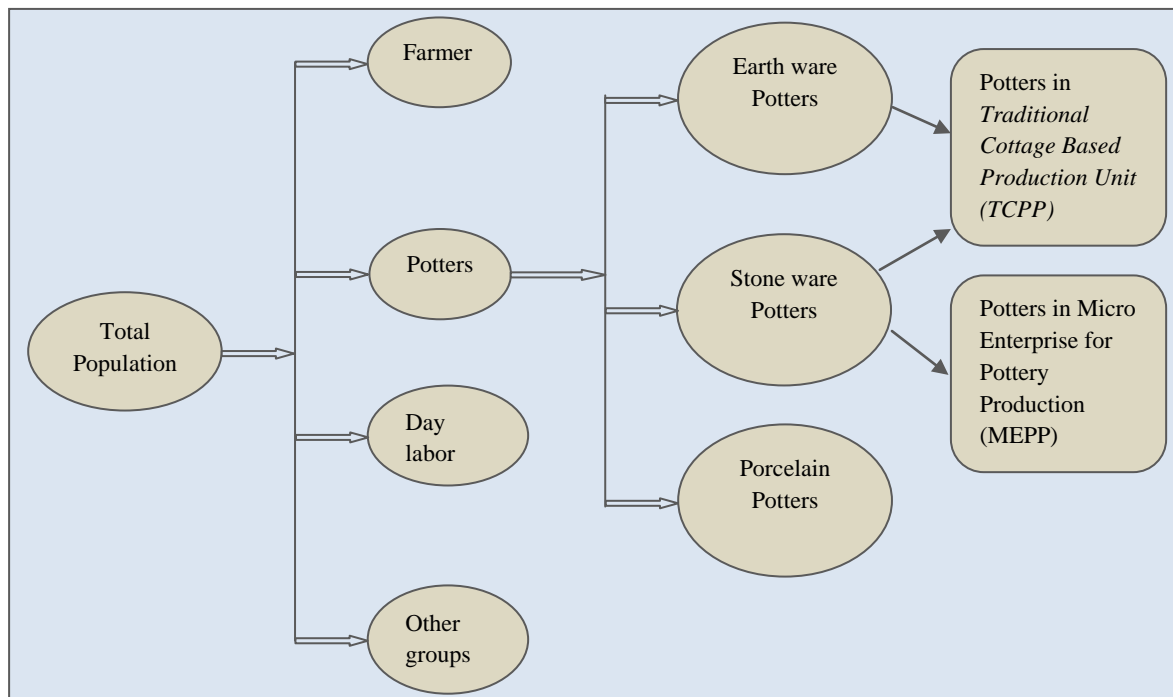
This research collect the information from the potters engage in both the production system. From three study location total 34 families engaged in pottery production is consulted. 15 of the potters work in the MPPE and 19 of them are engaged in TCPU.

#### *Sampling and Sample Design*

Sampling is “*the acquisition of a relatively small part of a larger group (population), usually with aim of making inferential generalizations about the larger group.*” (Clifford

et al. 2010). Others describe it as a set of techniques used to achieve representatives whereby each list entry represents one member of the population and has an equal probability of being selected (Bauer et al. 2000).

Sampling technique varies with the purpose of the data or information collected and also with the tools. For Guided Interview, which have satisfied the demand for the basic information regarding the study area, has followed the cluster sampling method. From different occupational group like farmers, day labors, potters are selected as the first cluster. Then within the pottery group potters included in the production of stone ware is identified as second cluster. From the group the potters were divided in to two types; Potters engage in TCPU and Potter engage in SEPP. Then form each of the group limited amount of potters have been selected for interview following the purposive sampling method. Only the adult people are considered as the respondent.



**Figure 03:** Clusters sampling to select the respondent of the Interview Guide for the research.

Considering the data requirement the social group for the Group Discussion is selected. To satisfy the research 3 groups have been selected for the group discussion i.e. Potters engage in TCPU, salaried potter engage in the MEPP and entrepreneur of the MEPP. Usually at least one week before a message was conveyed to the targeted group about the

group discussion. In the designated date the local potters select 5 to 7 representative from them for the group discussion.

While doing the Guided interview, if any interviewer seems to be useful for further data collection, then the respondent was considered as key informant. Thus the selection of the key informant was purposive. Key informant also include different social group for instance youth group, women worker.

The level of credibility and reliability of the respondents is very important during the data collection procedure. For that, respondent have been chosen considering some criteria. Form each *Household*<sup>4</sup> one *adult*<sup>5</sup> have been interviewed. The Guided interview has been operated by visiting door to door of the potential informant. Yet the information collected from the guided interview has been checked with the information collected by group discussion and key informant interview.

#### *Data collection procedure*

In this research a specific type of in-depth interviewing which is known as guided interview will be used. As stated by *Berry (1999)*, it is “a *type of interview which researchers use to elicit information in order to achieve a holistic understanding of the interviewee’s point of view or situation*” (*Berry 1999*).

*An interview guide* was used to collect the information relevant information. At first a draft interview guide was prepared and has tested in the field during the reconnaissance survey with some dummy interview. With its feedback, the interview guide was finalized. As interview guide intended to give much flexibility to the responded, it has both the combination of the open ended and close ended answering pattern. Also if anything interesting came up from the respondent view, it was immediately noted in the questionnaire. Each of the interviews took from 1.5 to 2 hour duration. Thus the interview was collected in an informal way. Often it was taken along with their working and leisure time.

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<sup>4</sup> The people who share daily food will be considered as *household*.

<sup>5</sup> A person will be considered as *adult* if s\he is within Age limit of 18 to 65 and have a good mental health.

**Group Discussion (GD)** is a special type of data collection tool. In this research, 3 GD in 3 sites have been consulted. To do so help of the local facilitator has been arranged. Researcher himself acted as the note taker. Each GD engages 3 steps. At first, the facilitator has been appointed and trained to be the moderator. Then, with the help of the potential participants of the GD, the time and the place have been fixed. The Facilitator has helped the researcher in this regard. At last, on the appointed day, GD has conducted. The expected participants for the each GD have been 5 to 7 participant. The total discussion was conducted following a checklist of information prepared earlier for the each GD.

While doing the Group Discussion and the Guided interview if the researcher considers a respondent as a potential source of information, then instantly the respondent was considered as a potential candidate for. Thus the **Key Informant Interview** was followed in unstructured way with informal **key informant** manner to have more flexibility to collect the data.

**Observation** is a way of data gathering by looking into the research subjects in *natural or structured environments*. There are different types of observation. This study uses the “*complete observer type*” in which the *researcher observes from the outside* (Tashakori et al. 2003). Researcher considers him as an outsider of the targeted group collect the data as an outsider perspective. Personal observation was used to get background information and also the reflection of the researcher towards the study area and the respondent which was kept maintaining a daily log.

### 3.3.3. Data interpretation and analysis

To analyze the data and information collected, this research has used SWOT analysis model. SWOT analysis is a tool developed by Albert Humphrey that helps a research or project to evaluate the *Strengths, Weaknesses, Opportunities, and Threats (SWOT)* involved. By providing insights into the past, SOWT analysis can help a production unit to identify existing or potential problems with possible solutions. By using the SWOT the collected information have been sorted and analyzed to have an insight about the existing problems and possible solutions for scaling up of the current pottery production units.

In doing so, this research has followed *Objectivism* approach of data analysis as it allows analyzing the social world and the reality beyond data (Marvasti, 2004). As most of the data collected from informants have collected in informal and qualitative way, the interpretation of the data mainly depends how the respondent the researcher view the context considering the pottery group and the study area. Sometime data itself is not enough to explain the practical situation. Personal observation, opinion, and reflection of the informant play a central role to establish the whole picture. Thus Objectivism approach gives the flexibility to do so. It also considers interpretative-descriptive method, which relies on people's words and meanings as a data for analysis (Belenky 1992 in Maykut et al. 1994). Personal views of the potters, condition of the potter community, their problem, and potential solution were collected with their words through interview.

#### **3.4. Viability and reliability of the study**

Validity depicts the relationship between the problem statement and the collected data. It also shows the extent data describes reality with the existing context. It is a way to make the research sound, legitimate and relevant with the theory and its investigation.

This research use sustainable livelihood approach as it is the most appropriate theoretical base for the research problem. It considers people's livelihood strategies as an appliance for creating better livelihoods, address poverty and lead to sustainable community development. *Sustainable Livelihood Framework (SLF)* approach also helps the researcher to collect the data and information and data regarding the livelihood assets and the constraints as well.

Internal validity is a very crucial aspect for qualitative research. Trustworthiness and authenticity are the basis of validity, considering the qualitative inquiry. The inquisition has to reflect the reality of the field and the idea of the targeted community. The main concern is '*with the factual accuracy of the researchers' account that is if you report that an informant made a particular statement in an interview is this correct?*' (Huberman and Miles 2002)

During the field visit primary data and information was collected directly from the pottery group, the owners of the small enterprise and also from the local workers. The



information collected was presented through their own perception which reflected to the reality they are living and also the situation in which they working. There was much caution for minimizing the influence of the interviewer upon the data collected. Data have collected and noted as the respondent mentioned.

As the Guided interview took quite a long time to conduct, the researcher has to give flexibility to the respondent about the timing and location of the interviewing. In most of the cases the potters were interviewed while they were working. The process was helpful for the data collection as while taking the interview, the interviewer also have some observation regarding the pottery making process. While interviewing, the position o the respondent was also considered. As an example, if the respondent was a salaried worker in the small enterprise, then the permission of the owner of the production unit took consideration to give the respondent space and flexibility to ensure best response. According to my observation most of them were free with me in their presentation.

### **3.5. Conclusion**

This chapter has outlined the activity and has selected specific research design by adopting which further the further research have been framed. The delineated methodological approach, study area, data collection methods, tools and procedure guides the research further to satisfy the research objectives.

## CHAPTER FOUR: USEFUL LITERATURE REVIEWS AND THEORITICAL FRAMEWORK OF THE RESEARCH

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### 4.1. Introduction

The chapter has introduced the pottery as the focus point of the research. To have a clear idea the history of pottery and potters in Bangladesh is discussed along with the existing condition. An account has been given depicting pottery as a cultural heritage. This chapter thus has built a general understanding about the potters and pottery work in Bangladesh.

This chapter has also delineated the connection between the research and theoretical framework. The research mostly considers Alternative Development, Sustainable Livelihood and Sustainable Livelihood Framework (SLF) as the central theoretical perspective for this research. The chapter has provided definition for some important term as the research has taken them. Overall, it has depicted the major theoretical and analytical perspective that has been guiding the study.

### 4.2. Literature review

#### 4.2.1. Pottery in Bangladesh

Pottery in Bangladesh is a traditional cast based occupation inherited by the ‘Kumars’ (the potters). The traditional way of earthwork is done by individual or family based cottage industries serving the local market. It is one of the oldest and most widespread of the decorative arts production units. The production process engages both male and female.

Generally pottery industry can be typed as three categories i.e. Earthenware, Stoneware and Porcelain production unit. They differ from the clay used for production, also with the burning process.

*Earthenware* is the longest-established pottery type, dating back to the Stone Age. It uses a generic composition of earthenware clay. Characteristics of this product can be portraying as the softest type, fired with lowest temperature. Generally it is porous (absorbs water) and can be scratched easily. Usually the colors of the products range from buff to dark red, cream, grey or black. It can be thin but will be frail, and more porous

than the other typology. The category of earthenware includes all ancient pottery, terracotta objects, 16th century and later Japanese and Chinese pottery, as well as European pottery made up to the 17th century (*Ceramic Art, 2013*). Historical places of Bangladesh like Paharpur Monastery of Rajshahi, *Mahastangarah Monastery* of Bogra and *Moinamoti monastery* of Comilla have many historical Earthenware objects from 3rd century up to 13th century. ***Traditional Cottage based Production Unit (TCPU)*** still mostly engages in earthenware production to meet the local demand.

***Stoneware*** can be portraying by its stone-like solid and dense appearance with impermeability. The final product has a light-brown or buff color. It is decorated with different hues and artificial color. It is usually used to manufacture commercial ware like vessels, vases, plates, and bowls to make those more attractive. In the study area, ***Micro Enterprise for Pottery Production (MEPP)*** usually engages in producing stoneware.

The difference among ***porcelain*** and stoneware is vague. Chinese ceramicists define porcelain as pottery item that provide ringing tone when knocked. On the other hand, in Europe it is characterized by its translucence when held to the light. The color of unfired porcelain clay is white to cream and after firing they both are white. In this research this type of pottery production is not considered as subject matter.

Earthenware objects are sold whole the year in front of the Shishu Academy in the capital city Dhaka. The objects come from the suburban areas of Rayerbazar, Kaliakoir, Fulpar and Manikganj. Besides, those are also collected from Patuakhali, Rajshahi, Shariatpur and Comilla. Nonetheless, the demand of pottery is high in the country as the pottery objects like vessels, vases, plates, and bowls can be seen in all houses' drawing room to kitchen of rich and poor. The objects also are being exported abroad due to its artistic value.

#### 4.2.2. Pottery: A Cultural Heritage of Bangladesh

**Pottery** appeared in Bengal, in all probability, in or around 1500 BC (*Rahman 2012*). Fine and quality clay is the distinctive geological feature of alluvial Bangladesh and for the centuries it has been exploited by the inhabitants as a natural resource for pottery work. From all the prehistoric archaeological sites in Bangladesh i.e. Mahasthangarh,

Govinda Bhita (2<sup>nd</sup> Century BC to 7<sup>th</sup> Century AD ), Bhasu Vihara (7<sup>th</sup> Century AD), Wari-Bateshwar (about 450<sup>th</sup> Century BC), Salbon Bihar (7<sup>th</sup> to 8<sup>th</sup> century AD), and Paharpur Bihar (about 7<sup>th</sup> to 12<sup>th</sup> Century AD), archeologist found many pottery object which depicts the everyday life of the people in ancient period. The pottery found from different historical sites can be classified as *Black and red Ware, Northern Black Polished Ware, Rouletted Ware, Amphorae, Black-slipped Ware, Knobbed Ware etc.* In the early historic sites the potteries have played an important role as diagnostic characteristics, but in the early medieval, medieval and late medieval period the pottery loses its importance a bit because it that period metallic utensils replaced traditional potteries.

***Black and Red Ware*** is a vessel type which is black in the interior and the exterior top, and red on the exterior. In most pots a slip is applied on both sides but vases are treated with slip on the exterior and up to the neck on the interior. Some shreds have achieved a smooth and shining surface due to burnishing. The fabric is medium, though a coarse variety occurs in the early and degenerate phases. The common shapes cover medium-sized vase, bowl, channel-spouted bowl, basin, jar, dish-on-stand and vase-stand.

This type of pottery is a commonly found in practically all over India and in different period and the chronology in terms of absolute dating suggest that the Black and red ware in these area flourished in 1500 BC.

Usually ***Northern Black Polished Ware (NBPW)*** has an excellent slim framework with a remarkably gleaming surface. Though Most of these pots varies in color from blackish to grey, but rarely reddish varieties have also been found. Although 90 percent of NBPW has the exterior color as jet black and brownish black, the remaining can found in steel blue, pinkish, silvery, golden, brown, chocolate, violet and deep red. The common shapes in this category are *dishes with inverted or straight sides; bowls with straight, convex, corrugated or tapering sides, and lids with flat terminal.* Other shapes includes bottle-necked jars, knobbed lids, saucers, small vases with varying rim forms and conspicuous necks, spouted jars, and *surahi*.

The *Northern Black Polished Ware* dated back to 700 BC to 300 BC in the earlier phase and it prevailed later from 300 BC to 100 BC or even up to the beginning of the Christian era in the Indian Subcontinent. In Bengal, though the scientific justified dates are not available, the tentative time range is approximately from 400 BC to first century AD. Prominent NBPW producing sites were Mangalkot, Chandraketugarh, Bangarh, Mahasthan and Wari-i-Bateshwar.

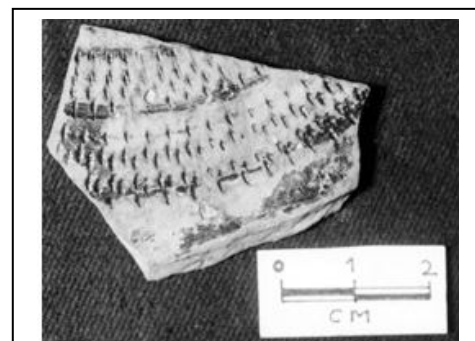


**Picture 01:** NBPW found in Mahasthan.  
*Source: Rahman, 2012*

*Black-slipped Ware* is more like NBPW but lacks its shiny properties. This type of pottery has a smooth black layer in the surface providing somewhat shiny appearance. Different types of bowls are mostly found items considering black-slipped ware. Yet dish, jar, Spouted Jar, vase and miniature vessel have also been revealed in different expeditions. Generally, the ware has a fine to medium fabric with a grey core.

Several *Black-slipped Wares* have been excavated from Mahasthan Garh, Wari-i-Bateshwar, Bangarh and other historical and archaeological sites in Bangladesh dated back to the same period of time as NBPW.

Another classical pottery type from early historic period, *Rouletted Ware*, has been found in many archaeological sites in Bangladesh, India, Sri Lanka and Southeast Asia. Rouletted Ware is described as a bowl having a wide incurved rim, a contiguous shape with body and base, and devoid of foot. With a fine gleaming exterior this type of ware exhibits an assortment of color and cavernous concentric circular ornamentation on the inner shell of the base.



**Picture 02:** Rouletted Ware found in Mahasthan.  
*Source: Rahman, 2012*

This particular ware expresses an important example of trade and exchange network across the Indian Ocean during the early historic period. The existence of Rouletted Ware is the burning proof of the participation of Pre-historic Bangale Region i.e. Mahasthan, Wari-i-

Bateshwar, Tamralipti and Chandraketurgarh in the growing trade network of the early historic period. The Rouletted Ware of Arikamedu has been dated to 2<sup>nd</sup> to 1<sup>st</sup> century BC.

Usually other than Black and Red Ware, Northern Black Polished Ware, Black-slipped Ware and Rouletted Ware, pottery specimen all the other pottery objects scattered over archaeological sites in Bengal are generally termed as **Common Pottery Ware**. These types of pottery usually have a dull red or grey color. In most of the cases the fabrics are coarse to medium in texture and devoid of slip or wash. Earthenware is still in use throughout rural Bengal. The different pots and jars for common use and ceremonial pots such as *Raserhadi*, *Shakherhadi*, *Dharmaghat*, *Shitalghat*, *Nagghat*, *Manasaghat*, *Muharramghat*, *Gazighat*, *Mangalghat*, *Laksmisada* bear testimony to the ancient potters' art of Bengal.

**Table 04:** Pottery as a cultural heritage of Bangladesh

Pottery Relic Type	Archeological sites	Historic Period	Characteristics
<b>Black and Red Ware</b>	Mahasthan Garh Wari-i-Bateshwar.	About 1500 BC	Have black in the interior and red on the exterior.
<b>Northern Black Polished Ware</b>	Mangalkot, Chandraketurgarh, Bangarh, Mahasthan Garh, Wari-i-Bateshwar.	Earlier phase: 700 BC to 300 BC. Prevalled later up to 300 BC to 100 BC.	Fine thin shape. Remarkably gleaming shell. Usually exterior color as jet black and brownish black.
<b>Black-slipped Ware</b>	Mahasthan Garh, Wari-i-Bateshwar, Bangarh.	Within 700 BC to 100 BC.	Smooth black layer. Fine to medium fabric with a grey core.
<b>Rouletted Ware</b>	Mahasthan Garh, Wari-i-Bateshwar, Tamralipti Chandraketurgarh	From 2 <sup>nd</sup> BC to 1 <sup>st</sup> BC.	A contiguous shape with body and base. Have a wide incurved rim.
<b>Common Pottery Ware</b>	<i>Raserhadi</i> , <i>Shakherhadi</i> , <i>Dharmaghat</i> , <i>Shitalghat</i> , etc.	From About 1500 BC to present days.	Fabrics are coarse to medium in texture and devoid of slip or wash.

Source: Rahman, 2012.

#### 4.2.3. Potters as a Community

Potters generally named as '*Kumar*' or '*kumbhakar*' in *bangla*, is a traditional occupational group who used to involve in the clay modeling and earthenware preparing process in Bangladesh like various utensils, household items and toys. Being an occupation based cast name, '*Kumar*' specify that the group have been involved in the pottery production and marketing by generation and is almost exclusively in the hands of Hindus. The social standing of the *Kumar* in Hindu society considering the caste system is respectable as they are recognized as members of the '*Navashaka*' group and the highest cast '*Brahman*' would drink water from their hands.

Traditionally the countless home utensils in the village area prepared by kumars including *kalshi* (household water vessel), *handi* (cooking pot), *jala* (big water jar), *shara/dhakna* (pot covers), *shanki* (dish), *sharai*(jug), plates, cups, *badna* (water pot) and *dhupdani* (vessel for scented sulphur). Clay made toys, decorative, vases, hand bank are also part and parcel of the traditional fairs and festivals in Bangladesh. Many *Kumars* manufacture bricks and tiles. Usually the potter lives in a community in a village usually known as '*Kumar Para*'. Traditionally potters inherited family cottage industry with the instrument and the technical knowhow. Usually a family with the entire member acts as a production unit. The pottery production steps generally include;

**Step 01:** Collection of Clay and stocking,

**Step 02:** Preparing the clay for production by throwing,

**Step 03:** Modeling the shape and size of the wares.

**Step 04:** Drying the earthenware in the sun

**Step 05:** Finally, Firing and coloring it.

In past, pottery was done by scooping out clay from a well water tempered clay vessel or by squeezing cakes of clay on to the pottery form. The potter's wheel (*chak*) is a comparatively later invention. Traditionally the *Kumars* now apply wheels to mold and shape the clay cakes. After modeling then the comparatively fragile clay objects then put in to the sunlight to be prepared for fairing. After some time the soft clay become somewhat hard to put in the kiln (*panja*). After that the finished pottery product is then prepared for marketing by decorating in different colors and designs. Here both the male

and the female members have contributed in this production process. Thus pottery is labor intensive cottage industry absorbing both the male and the female of the community in the production unit.

In Bangladesh the earthenware prepared at Dhaka, Rajshahi, Chittagong, Comilla, Faridpur and Bogra popular among the country for its quality finishing.



**Pictures 03:** Potter community In Bangladesh

*Sources: Demotix, 2009*

The research is primarily based on the potter community and aims to recognize the resource base of the different pottery community in the study areas. This study will consider the pottery community as the pottery group where the main livelihood concentrates within the pottery production and marketing action.



### **4.3. Theoretical Framework**

#### 4.3.1. Introduction

In this portion, the relevant theories, key concepts for the research conceptualization and development are discussed. The research primarily based on the development meta-narrative alternative development theory. However, for further understanding about the resource base and the livelihood assets development process in the study area, Sustainable Development Framework Approach will be used.

#### 4.3.2. Some Key Concepts

##### **Development**

In this research concept of development is central as it aims to understand the way pottery group is and whether there is any potentialities to develop the situation further. Apart from the conventional approach to understand development as economic growth, this research mostly based on Human Development concept. According to UNDP (2002), Human development is about increasing people's choice and creating an enabling environment in which people can develop their full potential and lead productive and creative lives in accordance with their needs. Holistic human development is about creating an enabling environment that empowers the population to take active participation in making choices affecting their lives and harnessing their Potentialities to improve on their livelihood.

Burkey (1993) have given an illustrative definition as, the development should be necessity oriented, should meet both hard and soft value of human need; endogenous as the development should be stemming from the heart of each society; self-reliant as the community should depends mainly on its own strength and resources; ecologically green, exploit the natural resources rationally and based on structural transformation as an integrated whole. As mentioned by the *Burkey*, this research also try to portray the development as improvement in the material and non materialistic development within pottery group with active participation of the local people, utilizing local resources in a green way.

## **Livelihood**

A *'livelihood'* is considered to consist of the assets, activities and entitlements that enable people to make a living (Singh et al 1994). Assets are designated by human capital, social capital, natural capital and physical capital (Helmore and Singh 2001). Drawing on Ashley & Carney (1999), a livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities, assets both now and in the future.

Robert Chambers and Gordon Conway in their composite definition of sustainable rural livelihood (1992) which can be the basic understanding of the livelihood in this research,

*“A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term”.* (Chambers et. al.1992, on Krantz, 2001)

In this research the central theoretical framework has been sustainable Livelihood framework put forth by DFID which consider a bit simplistic definition derived from Robert Chambers and Gordon Conway's definition by Ian Scoones (1998) Sustainable livelihood:

**“A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can copewith and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.”** (Scoones 1998)

### 4.3.3. Meta-narrative: Alternative Development

*“Alternative Development thinking introduced new understandings of development focused on social and community development and ‘human flourishing’”* (Friedmann, 1992 cited on Pieterse, 2010). In spite of the traditional understanding as development is economic growth, alternative development meta-narrative first advocate the development of the individual as well in social development. Alternative development has taken

diverse paths that reflect poverty, unemployment and inequality in the definition of development focusing on human welfare and social aspects of the development process that goes beyond economic growth.

According to Martinussen (1997) the beginning of alternative development concept goes back in the economic development debate of the 1960s and early 1970s, when a critique of conventional theories such as dependency and modernization argued that those failed to address global poverty. According to Martinussen (1997) the initial economic growth and development theories focused more on macro- economic growth strategies without considering poor segment of the people. Conventional development theories neither consider ecological perspective of development nor human perspective to development. Economic Development experts then have initiated new people centered approach to help the living conditions of the poor which is the earlier stage of the Alternative development theory.

The focus of alternative development meta-narrative was poverty alleviation through better understanding of local resources, participation, empowerment and better capabilities of the poor to share the benefit of the production. This is the theory which first looks the development as human development and sees the poverty as multi-dimensional factor. This theory suite this research as the basis of the research depends mostly on the understanding of the local recourses of different pottery production unit. The concept of poverty as a multi-dimensional factor and development within the community approach has given core values to this research.

To have an idea about the development of the society, one should focus on criteria beyond per capita income, rather the basic elementary criterion should be whether or not the '*society is being for itself*'; that is its political, economic and cultural decision-making power is located within (Burkey 1993). Dudley (1972) mentioned three basic criteria to understand development as poverty, unemployment and inequality and if the development process experience negative growth in even one of this criterion, it could not be seen as an overall development at all.

During the conference on World summit in 1990s, UNDP as well focused on poverty as the main agenda for Social Development and reference was made on the importance of

active participation of the poor in strategy making process and share their own experiences, livelihood systems and survival strategies (Miutinussen 1997).

As advocated by the alternative development, this study will consider development as the human development and poverty with its multi-dimensional nature. Understanding the local resource of the different pottery production units as well as the vulnerability context of the potter community is the core to this research. With a participatory approach to the pottery group, this study has tried to understand the situation and with that context have satisfied the research problem.

#### 4.3.4. Sustainable Livelihood Approach

Within the course of Alternative Development theory the micro-narrative sustainable development have come forth in 1990s which is the main focus of this research. Sustainable development has been used to analyze assets; activities within the pottery community and it have its focus more on assets, activities and processes that derive the outcomes of livelihood strategies.

Sustainable Livelihood (SL) idea, introduced by the '*Brundtland Commission on Environment and Development*', and '*The 1992 United Nations Conference on Environment and Development*', goes beyond the traditional definitions and approaches to poverty eradication and consider some important dimension of poverty such as recourse access and social exclusion. The difference of this approach from the traditional strategies is the appreciation local people as resourceful asset and their own forms of resources and strategies. Thus this concept grounded in real lives of the common people; what they think about themselves and their activities. It is deeply rooted in people's decisions about sustaining themselves and appreciates people's daily struggles and help to develop from within. Now days, livelihood development need more attention in the different aspects and method which either constrain or enhance poor people's scope of livelihood in sustainable manner.

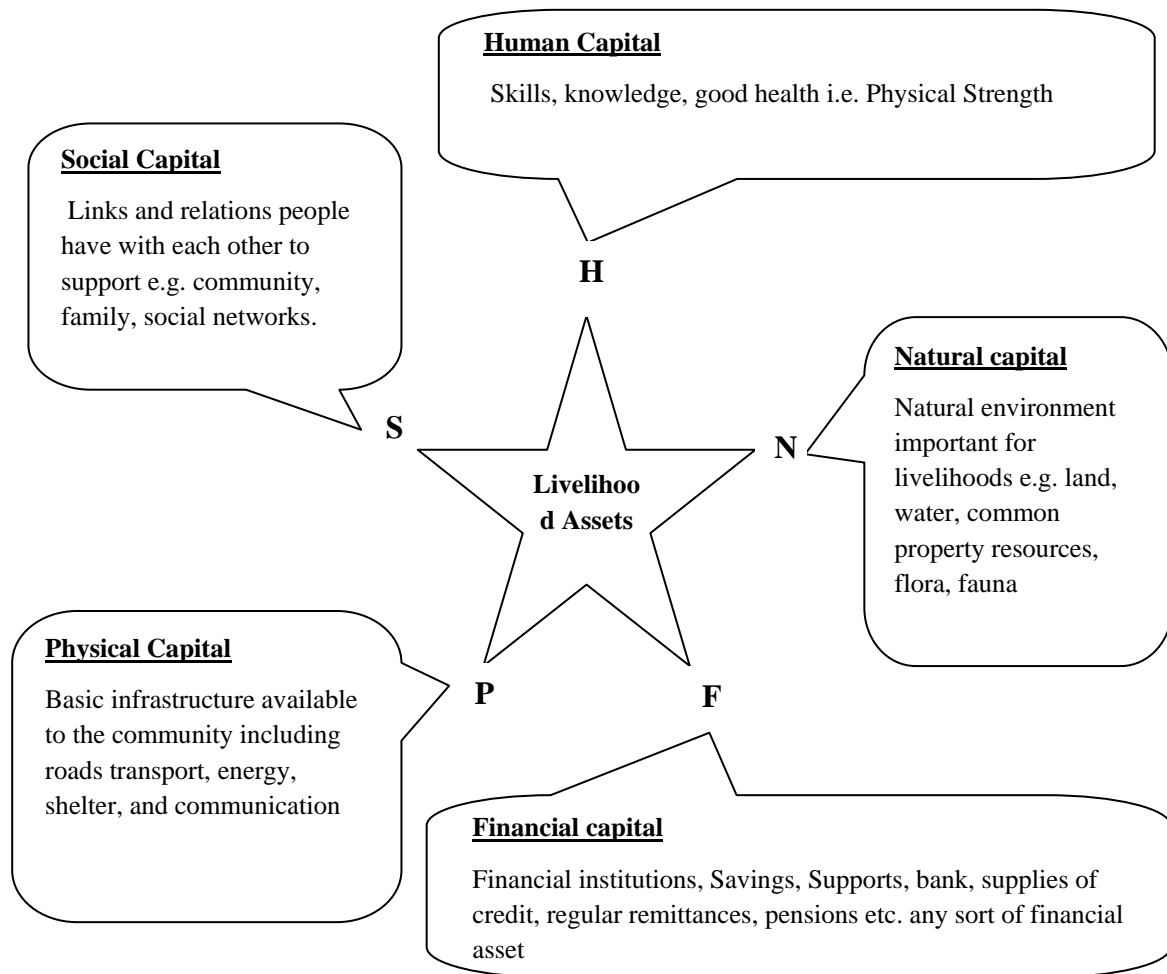
According to the Lasse Krantz in her paper, '*The Sustainable Livelihood Approach to Poverty Reduction*' shows three insights into poverty which support Sustainable Livelihood Approach. The first is that though economic growth is essential for poverty

reduction, there are no direct relationship between these two as access to the benefit of economic development not always goes to the poor. Thus depends on the capabilities of the poor to take advantage of expanding economic opportunities. Secondly, poverty, other than the low income, has different dimensions as bad health, illiteracy, lack of social services. Those dimensions are also impotent for sustainable development. Finally, poor know their situation and needs best thus their voice must be include in policy making process. (Krantz, 2001)

Sustainable livelihoods derive results but more importantly keep a track about the capacities and processes through which such result might be achieved in self-sustained manner. By providing a holistic approach to development, considering political, social, economic and psychological dimensions, the concept can act as a basis for the policy framework. Sustainable livelihoods approach intends to endorse overall development by making it sustainable in ecologically, institutionally, socially, economically and to produce positive livelihood outcomes (Ashley and Carney 1999). This approach employs a holistic perspective in the analysis of livelihoods to identify those issues of subject areas where an intervention could be strategically important for poverty reduction, either at the local or policy level (Helmore and Singh 2001).

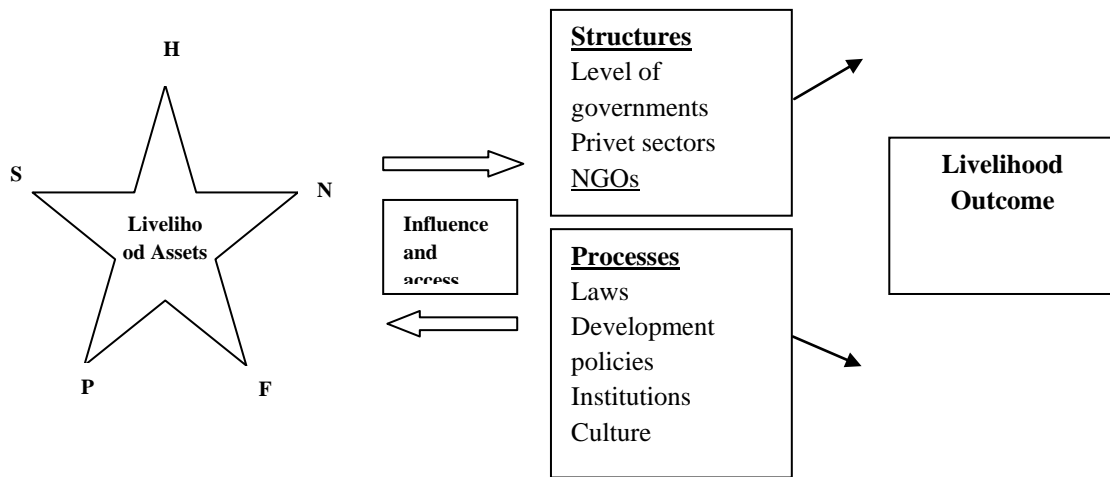
According to Helmore and Singh (2001), an important aspect Sustainable Livelihoods approach is the appreciation that the basis of human development and economic growth is livelihoods, not only the jobs, but a wide varied range of activities people engage in to make their living. These activities are very important for an economy to prosper. Yet livelihoods also consist of local assets, which can be identified as different types of capital. As Chambers and Conway (1999) mentioned, a livelihood include the capabilities, assets/capital (including both material and social resources) and activities required for means of living.

Understanding the local capital stock is the core to sustainable development approach. According to UNDP (1999), different type of livelihood asset or capital includes which eventually affect the livelihood option of the locality e.g. *Natural capital*, Social capital, Human Capital, Physical Capital, and Financial capital.



**Figure 04:** Different Type of Livelihood Asset According to UNDP (1999)

Ellis (2000) express another dimension of sustainable livelihood as it involve the assets (as natural, physical, human, financial, and social capital), the activities and access to these resources (mediated by different institutions, authorities and social relations) that together determine the living gained by an individual or household. So, linkage between the local recourses, activities of the people and the socio political structures of the area is interwoven to each other to construct an overall livelihood context. The people by their activity exploit the resources and the structures, authorities and the social relations (i.e. Policies of Government, prevailing laws, policies, and processes) control it through accessibility of the people to the resources. This holistic interrelation including people, assessable assets and the transforming structures and process eventually create diverse livelihood options as the outcomes.



**Figure 05:** Holistic understanding towards Sustainable Livelihood.

The capability of a livelihood to sustain and recover from stresses and shocks is central to the definition of sustainable livelihoods (Ashley and Carney 1999). Community with rigid structure, who are incapable of temporary adjustments to cope with short time vulnerability context like natural disasters, war or even technological advancement of development, are vulnerable and unlikely to achieve sustainable livelihoods. Thus to achieve sustainable livelihood certain externalities which can affect the livelihood group should be identified as vulnerability context.

Eventually, with a better understanding of local asset/resources, structures and process and considering the vulnerability context, sustainable livelihood approach give a holistic understanding of a community as a whole for being an economically productive unit with a sustained way. This is the reason this approach is selected as the central to understand the potter community to satisfy the research problem.

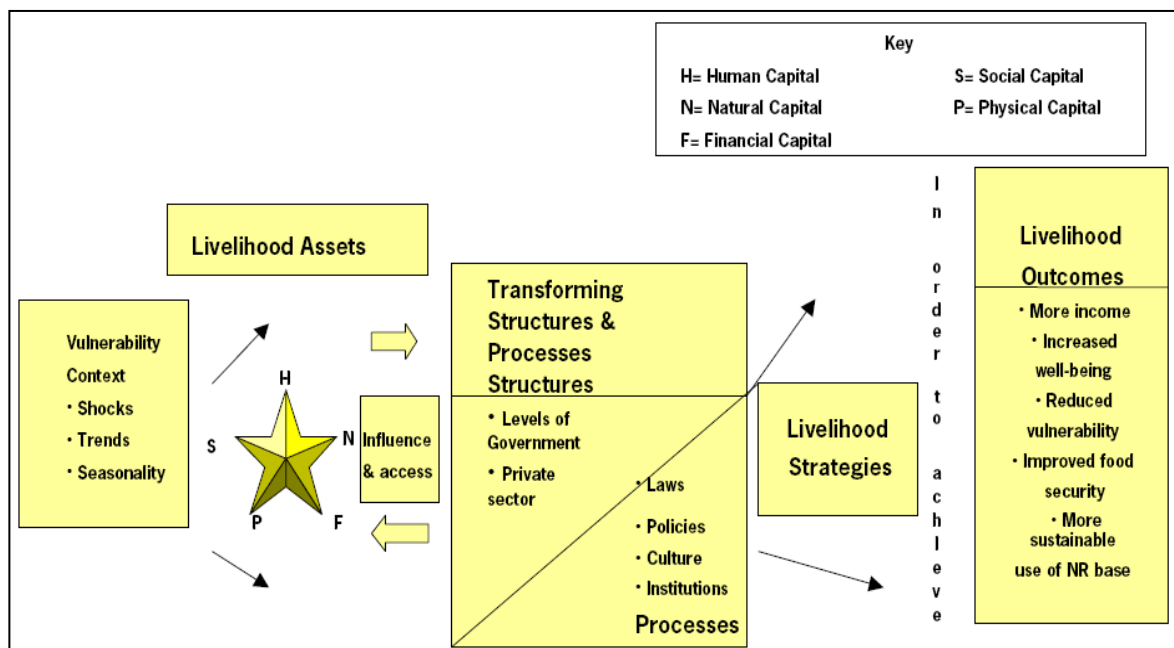
Guideline of the sustainable livelihood option is followed when designing the research problem. This concept is the focus of the study. This concept has helped the study to understand the target group- *Pottery Group*, more intensely and collect information respectively. It also has provided the basic framework for the analysis as well.

#### 4.3.5. The SL Approach Framework

In the classic paper “*Sustainable Rural Livelihoods: Practical concepts for the 21st Century*” Robert Chambers and Gordon Conway (1992) proposed a composite definition

(See Livelihood) of sustainable livelihood which is the basis of most of the livelihood framework. Though there is no unified approach, different agency like UNDP, CARE, DFID, uses this concept for program planning and assessment. In this research the ‘Sustainable Livelihood Framework’ (SLF) put forth by the *British Department for International Development* (DFID) have been used to understand and analyze the research problem.

The SLF of DFID is based on a somewhat modified definition (See livelihood) of SL put forth by Ian Scoones (1998) in his paper “Sustainable Rural Livelihoods: A framework for analysis”. The paper elaborated three basic elements of this framework as Livelihood Resources, Livelihood Strategies, and Institutional Processes and Organizational Studies.



Source: Krantz, 2001

**Figure 06:** DFID Livelihood Framework

Livelihood Resources are the basic material and social, tangible and intangible assets, ‘...from which different productive streams are derived from which livelihoods are constructed’ (Scoones 1998), can be termed as diverse form of ‘capital’ considering their part as a resource base. Five types of capital that are recognized by the framework are:

- I. *Natural capital*; consisting natural resource stocks (soil, water, air, flora, fauna etc.) and environmental services (hydrological cycle, carbon cycle, pollution sinks, etc.) based on which livelihoods are resultant.



- II. *Economic or financial capital*; the financial capital base (cash money, credit or debt, savings, economic assets.) for the adaption of any livelihood strategy.
- III. *Human capital*; includes the skills, knowledge, ability to labor and physical capability which are valuable for the adaption of diverse livelihood strategies.
- IV. *Social capital*; is the social resources (networks, social claims, social relations) upon which people use to pursue diverse livelihood strategies requiring organized dealings.
- V. *Physical Capital*; Basic infrastructure available to the community including roads transport, energy, shelter, and communication which act as capital base of diverse livelihood strategies.

As noted by Scoones in the paper, ‘...*identifying what livelihood resources (or combinations of ‘capitals’)* are required for different livelihood strategy combinations is a key step in the process of analyses. Understanding varied ‘*capital assets*’ is very important as people rely on it for making a living. In this research capital asset of the different pottery community and production unit is identified with a primary survey. The understanding towards the asset through SLF is the core to collect the livelihood asset data from the field.

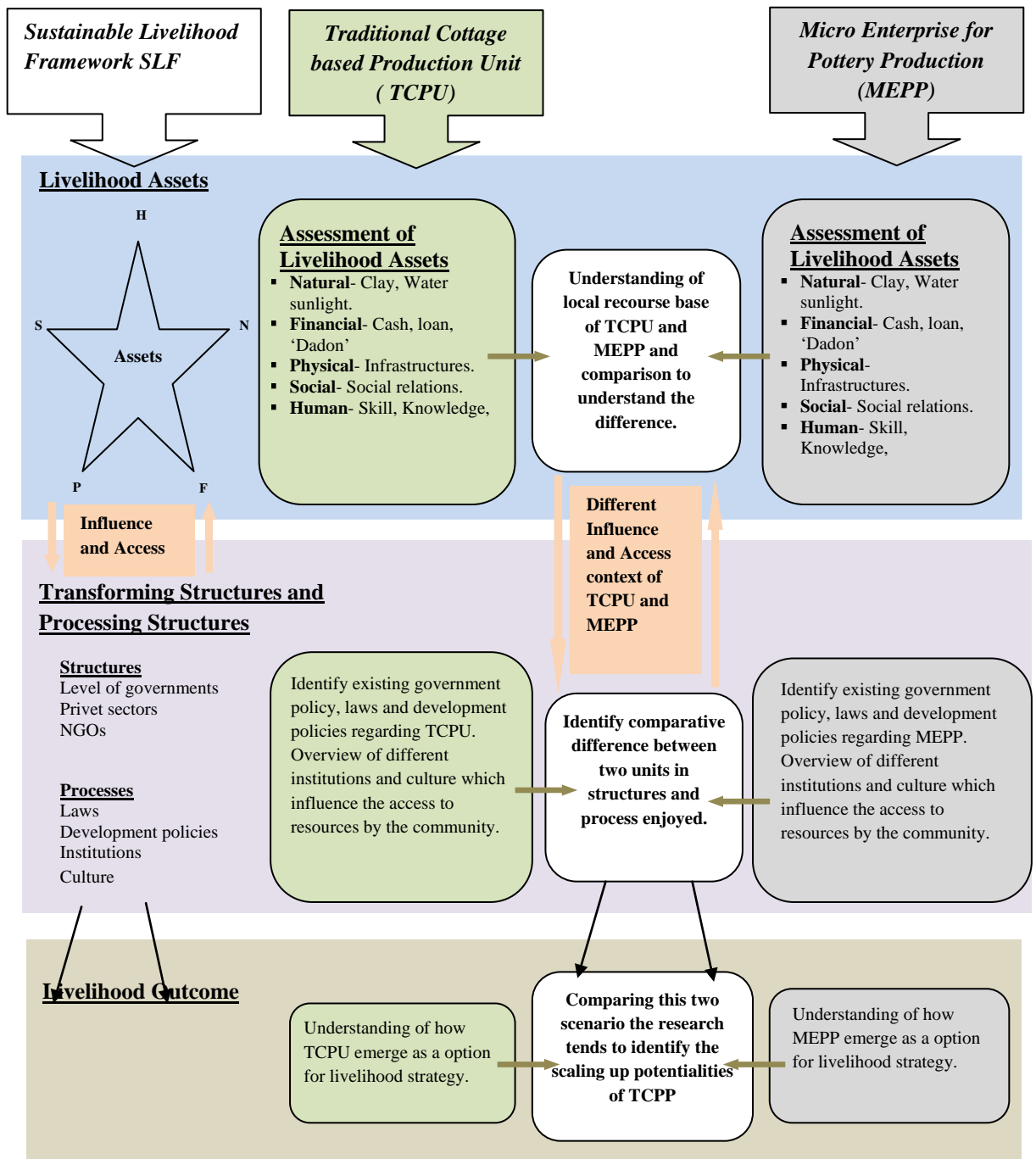
Livelihood strategies are also an important issue which must have to analyze to have an idea of the livelihood situation. The strategies more often evolve with a combination of activities which Scoones described as ‘*livelihood portfolios*’. The aspects behind a strategic combination of ‘*livelihood portfolios*’, are important to understand the holistic ideology of livelihood in the community. Moreover, the ‘livelihood pathways’ perused by one can be varied over different time scale like a seasons, between years or between generations. It depends on variant alternatives the household have, the situation of household in its domestic cycle or on more fundamental changes in local and external conditions. An historical approach to the livelihood options is thus central to the sustainable livelihood approach. This research tends to find out the constraints and the potential of the scaling up of the pottery unit; primary concern thus on the livelihood

group who are engage in the pottery. As noted by Scoones livelihood portfolio and pathways in the targeted community is collected and analyzed through the research to have the better understanding about the context the pottery industry in.

The livelihood strategies can often be varied between individuals or households depending on access to the asset, economic status, gender, age, caste, and social or political status. Thus a socially differentiated analytical approach to livelihood strategies is thus necessary. Different social group in the pottery is also identified in the different production units. The information regarding socio-economic status of the locality has been collected to analyze it further.

To understand the context through which livelihood evolve, Scoones points out, it also important to link livelihood resources and strategies and analyze the institutional processes and organizational structures that link these various elements together. Institutions directly or indirectly, control the access to livelihood resources affecting livelihood strategy options and, finally, create the scope for sustainable livelihood outcomes. Thus an understanding of various institutions with innate social relationships, and the power dynamics rooted in these, is therefore imperative. Different institution affecting the local production unit have been identified and analyzed to have an overview how the pottery production unit creating scope for the potter community.

Though using the theory various scope and essentials that form sustainable livelihoods can be noted but, in real life situation it is much more complicated to establish what the critical factors or constraints are. This is because every event is distinctive with its own values and demand own context-specific analysis. This is why SL analyses demands active participation of local people with their knowledge, perceptions, and interests towards sustainable livelihood development. Active participation of the potters and the other stakeholder is ensured in this research. The potters have their maximum flexibility to give their own view, opinion regarding their problems and potentials and the present context with very flexible mostly open ended questionnaire guide used to collect information. Several group discussions are also arranged with different social groups in the different areas.



**Figure 07:** SLF as the tool to structure the research.

Considering this research the Figure 7 has been illustrated how under the guideline of SLF the research structure is formatted. Main emphasis of this research is goes to understand the resource base of the two different unit of pottery production. With primary data collection procedure as mentioned in the research design part, several data collection tool like Questionnaire Guide, Group Discussion, Key Informant Interview, and Personal Observation have been utilized to make a data base to understand the resource base of the

respective community. The data have helped to understand the difference between the resources base of the TCPU and MEPP. This also informs us about the comparative constraints and potentials of the each production unit in respect to other.

An overview about the institutional processes and organizational structures that link TCPU and MEPP with the resource capital base and the community is also developed through secondary survey in the public policy documents and personal observation in the targeted community. This understanding eventually clarifies the power and politics of the locality to control access into the resource base.

By linking the resource base and the level of access defined by the institutional processes and organizational structures, general understanding about how TCPU and MEPP emerge as an option of livelihood strategy is developed and the potentialities of TCPU to scale up is determined through analysis. Thus Alternative development, Sustainable Livelihood approach gives the general guideline to conduct this research.

#### **4.4. Conclusion**

Understanding the developmental context of Bangladesh has been a central issue for this research. Later on the theoretical basis of the research is identified discussed and linked with the research design. Thus this chapter concludes with a solid understanding about the back ground of this research as well as has provided the theoretical framework which will lead the research work further to the analytical part.

### 5.1. Introduction

This section has described the study area, especially considering the better understanding of the resources base for the different pottery production units. By delimiting the existing practices, recourse base, cultural and social capital this section have played as the basis for the further analysis of the research problem.

An overview of the important differences in pottery production process of TCPU and MEPP, with their respective strengths and weakness, have also been the focus of this chapter.

### 5.2. Livelihood Assets/ Capital Stocks for Pottery Production

#### 5.2.1. Geological Location, Accessibility

For this research three different sites i.e. *Kaguzipara* (Dhamrai Upazila, Gazipur), (Ward 3, Savar Upazila, Dhaka) and *Pal Para* (Mirzapur Upazila, Tangail), have been chosen mostly sharing the one large market from the central part of Bangladesh (Map 03). Two sites have been chosen focusing *Micro Enterprise for Pottery Production (MEPP)*. And one site has been selected from the rural country side considering *Traditional Cottage Based Production Unit (TCPU)*.

*Khamar Para* is located at Shimulia Union, Savar Thana, Dhaka, Bangladesh. According to the BBS (2003) the area has 75 HH with a total 365 population (165 Male and 201 Female). The area situated only 1.5 km. away from Dhamrai-Kaliakair Highway and have direct connection to some large market areas like Shimulia, Chondra, Kaliakoir, Mirzapur, Dhamrai, Savar (Map 03). As located in the periphery of the Savar Paurashava, this area has both the rural and urban characteristics. From this site in total 10 potters engages with MEPP have taken as respondent. 1 Group discussion and 2 key informant interview is also taken in to account while collecting the information.

*Kaguzipara* is a part of Kumrail village located at Dhamrai Union, Dhamrai Thana, Dhaka, Bangladesh. According to the BBS (2003), Kumrail village had 882 HH with a total 3,456 population (1,751 Male and 1,704 Female). The area is primarily and urban

area. The area situated only 1km. away from Dhaka-Aricha Highway, in the heart of the Dhamrai Upazila and also have good accessibility to the surrounding markets like Mirzapur, Dhamrai, Savar (Map 03). From this site a total of 5 MEPP guided interview one group discussion and 2 Key Informant Interview is conducted.

MEPP units of both the Khamar Para and Kaguzipara share the large markets for the pottery goods i.e. Dhaka, Mirzapur. Several Points of capital city Dhaka has demand for the decorative pottery goods like Vases, tub, different toys, banks, bowls etc. Most of the pottery products are sold informally by the street vendors. This type of street vendor is very common site in the Dhaka university area, Dhanmondi residential area, Gulshan residential area and Mirpur residential area. Moreover hundreds of nurseries (the plant cell outlets) in the Dhaka city demand a lot vases and plant tub which eventually feed the local demand of pottery production in the study area.

*Pal para* includes a part of Fatehpur Union, Mirzapur Thana, Tangail, Bangladesh (Map 03) divided into separate part as Pal Para Doxin, Pal Para Poschim. According to the BBS (2001), Fatehpur Union had 4,640 HH with a total 22,453 population (11,150 Male and 11,303 Female). Though the site has been residing within 4 km from the Dhaka-Tangail Highway, the area is predominantly a rural area. This area is primarily selected for the TCPU pottery group and from this site a total of 19 TCPU guided interview one group discussion and 2 Key Informant Interview is conducted. The production units cater the demand of the local area. The usual products are the daily utensils like plate, water pot, bowl etc.

#### 5.2.2. Natural Capital

For the pottery production most important raw material is the clay. As shown in the Map 03 the study area consists of two general types of soil as Grey floodplain Soil and Non Calculus Dark Grey floodplain Soil both of them are rich in clay properties. According to the potters in both of the pottery groups, the primary source of clay has been the adjacent crop fields.

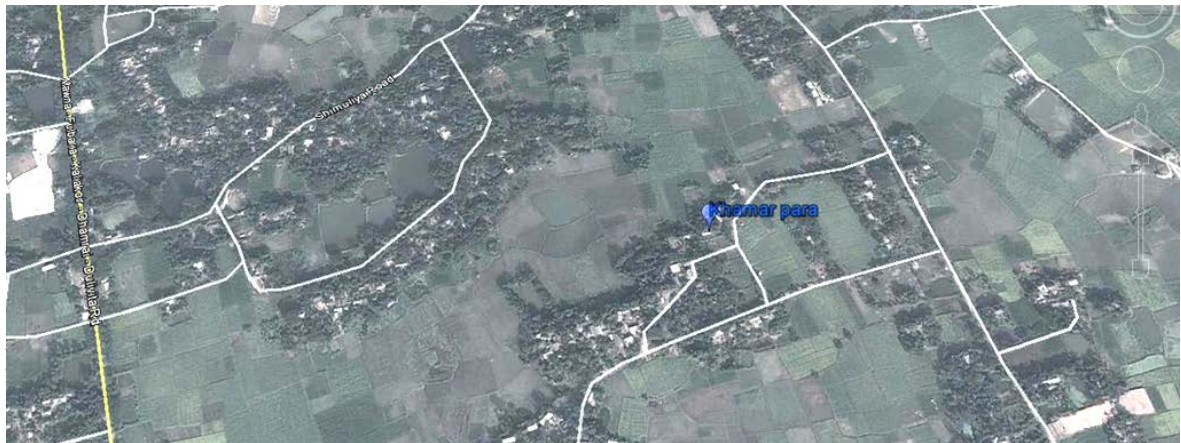
As being in a rural setting, Pal Para site has much better access to the clay resources. As shown in the map the site is surrounded by the crop field potential for clay collection (Picture 04).



Picture 04: Satellite picture of the landscape of Pal Para Village, Mirzapur.

Source: Google Earth

On the other hand Khamar para though much surrounded by the settlements comparing to Pal Para also has fair access to the clay resources (Picture 05).



Picture 05: Satellite picture of the landscape of Khamar Para, Savar

Source: Google Earth



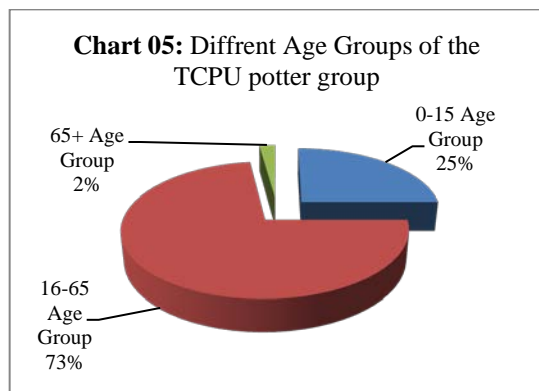
Picture 06: Satellite picture of the landscape of Kaguzipara, Dhamrai

Source: Google Earth

### 5.2.3. Human Capital

#### *Age Group*

A total of 19 potters HH, engaged in the TCPU, have been surveyed to collect the general information of the Pal Para. According to the collected information, 73 percent (Annex

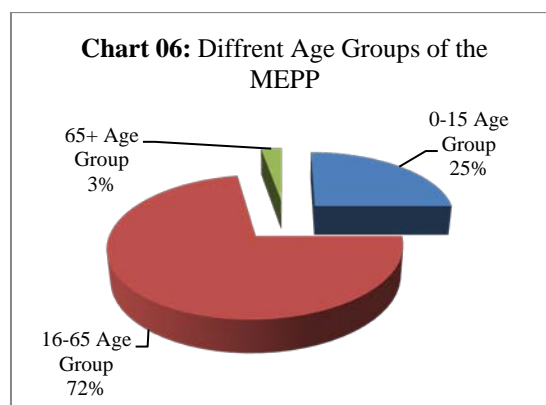


Source: Annex 02

02) of the TCPU population residing in the productive age group, between 16 to 65 years; the remaining 28 percent of the population is dependent population. Even in the dependent group only 2 percent (Annex 02) of the total population is over 65 ages; the remaining 25 percent has been in the age group of 0 to 16 years age group and are also potential labor force for the

future.

From a total 15 MEPP potter HH of Both Kaguzipara and Khapmar Para, it have been found almost same type of data that 72 percent (Annex 02) of the TCPU population residing in the productive age group, between 16 to 65 years; the remaining 28 percent of the population has been dependent part of the population. Even in the dependent group only 3 percent of the total population is over 65 ages; the remaining 25 percent has been in the age group of 0 to 16 years age group and have been also identified as potential



Source: Annex 02

labor force for the future. The pottery community in the both type of pottery has almost identical age structure considering the samples.

#### *Male/Female Ratio*

According to the collected data, the sex ratio in Pal Para has been 1.23 male/female in the productive age group (Age between 16 to 65) where as overall sex ratio has been 1.19



male/female (Annex 02). In the MEPP potter community (Kaguzipara and Kahmar Para) it has been 1.36 male/female and 1.25 male/female respectively (Annex 02).

Comparatively TCPU community is more balanced comparing Male/Female Ratio as criteria.

### *Different Occupational Group*

Considering the productive age group of TCPU potter community in Pal Para (Age between 16 to 65.), 52 percent fully engaged in the pottery production process while in MEPP 49 percent fully employed. 12 percent in TCPU group have been engaged part time in the pottery production process while 13 percent have been engaged in MEPP.

Women have been involved in the pottery production process in a large number. 53 percent of the female in TCPU pottery group have been engaged in pottery production in fulltime basis and 20 percent part-time while in the MEPP it has been 59 percent and 23 percent respectively. Overall 73 percent of the female in the productive group of TCPU and 82 percent in MEPP productive group have been engaged in the production process and considering the total employment 45 percent in TCPU and 42 percent in MEPP have been covered by female groups. (Table 05)

**Table 05:** Different Occupational Group within TCPU and MEPP.

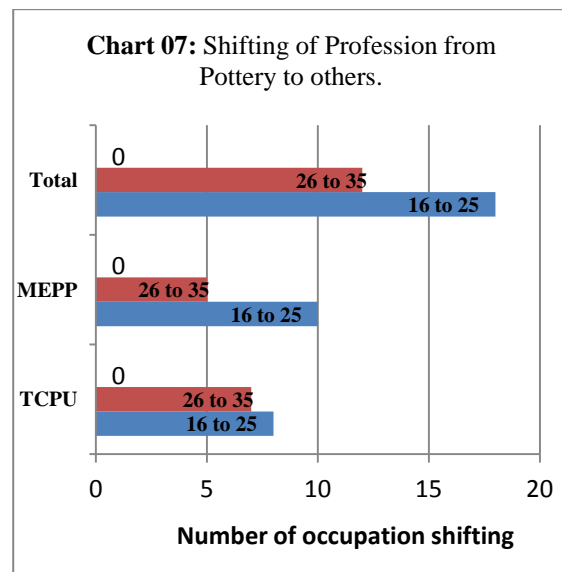
Type of Production Unit	Productive population	Overall	Engage in Pottery Production		Shifted Profession	Unemployed
			Fulltime	Part-time		
TCPU (Pal Para)	<b>Total/Overall</b>	<b>100</b>	<b>41</b>	<b>10</b>	<b>22</b>	<b>21</b>
	Male	55	41	3	41	16
	Female	45	53	20	--	27
MEPP (Kaguzi Para and Khamar Para)	<b>Total</b>	<b>100</b>	<b>52</b>	<b>12</b>	<b>29</b>	<b>8</b>
	Male	58	43	7	50	0
	Female	42	59	23	--	18

Source: Annex 03

Note: Values are in Percentage.

The overall unemployment in the area study area has been 21 percent in TCPU and 8 percent in MEPP. This is because some of the adult have been student thus doing not yet enter in the professional stage and 2 of them have been housewife. Thus TCPU group has more idle labor comparing to MEPP. Many of them are underemployed, yet to develop their full potential; mostly the female groups in the study site. (Table 05)

All the communities in the study area experience a shifting of profession; from pottery to other profession. According to the Table 05, 22 percent of the productive group in TCPU and 29 percent in MEPP have been shifted their profession from pottery to others like service holder, goldsmith, mechanic etc (Annex 03). It is interesting that, the shift only take place within male group. Considering the male group, 41 percent of the total male employment in TCPU and 50 percent in MEPP have been shifted from pottery to other occupation. Moreover from the *Chart 07* it is also evident that, occupational shift mostly happen within the 16 to 25 age group Annex 04.

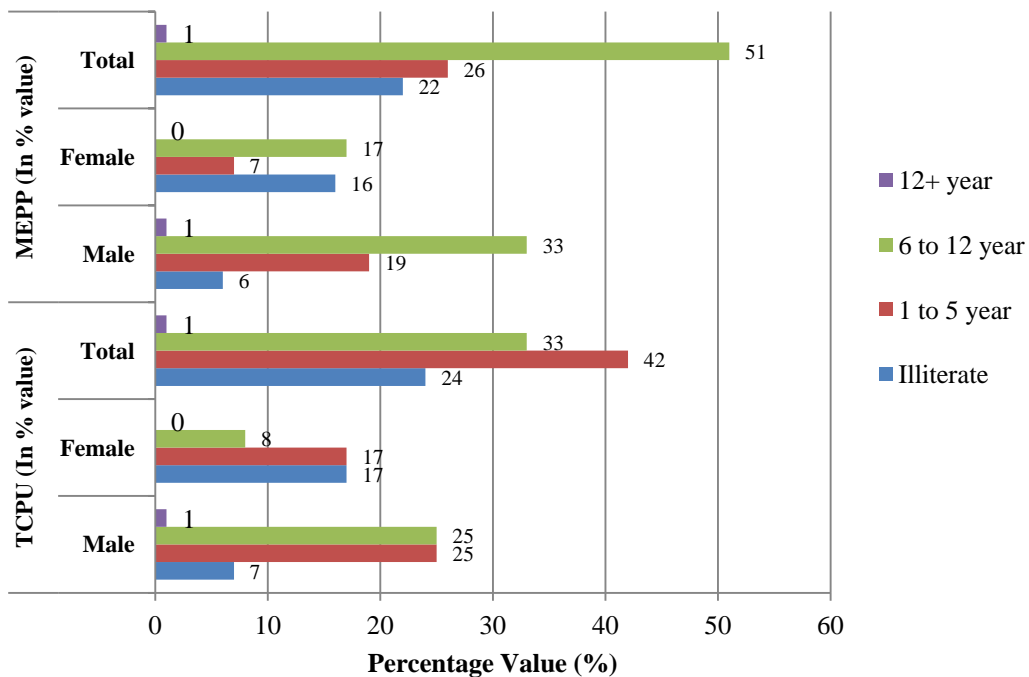


Source: Annex 04

### *Educational Status*

Literacy have been one of the most important determinant of the peoples wellbeing and it also affect the professional adaptability and choice; in this process play an important role to develop the livelihood portfolio of an individual or a community. In this research context, the literate peoples have been sorted as those who at least participate in primary education.

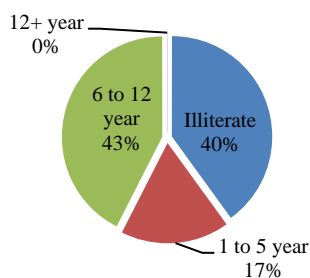
**Chart 08: Academic Status in the Different Groups of the Study Area.**



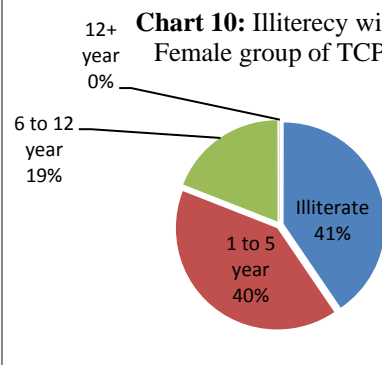
Source: Annex 05

The overall literacy rate has been 76 percents in the TCPU and 78 percent in the MEPP. Illiteracy among the female group have been significant standing 16 percent in MEPP and 17 percent in TCPU comparing to the male population which have been 6 percent and 7 percent respectively. Considering only female groups, the illiteracy have been 41 percent in TCPU and 40 percent in MEPP (Chart 109 and Chart 09). Considering the schooling year, MEPP have been clearly advanced comparing to TCPU.

**Chart 09 : Illiteracy within Female group of MEPP**



**Chart 10: Illiteracy within Female group of TCPU**



Sources: Annex 05

One important insight of the researcher here is that the percentage of male and female in primary level (Schooling Year 1 to 5) is almost equal but the participation of women in higher level education decreases dramatically; practically it is 0 if considering 12 year or more schooling year. One of the dominant reasons might be, maximum of the female group have got married before introducing in higher level education and after marriage they mostly stop going to school. On the other hand, the male participation in higher level education has also decreased mostly due to early involvement of male to income generation activity.

Thus considering the existing age structure and grouping, male/female ratio, different occupational groups, educational status of study area, a basic idea about the human capital of different group have been established for the further analysis. The important contrasts that have been found between MEPP and TCPU is-

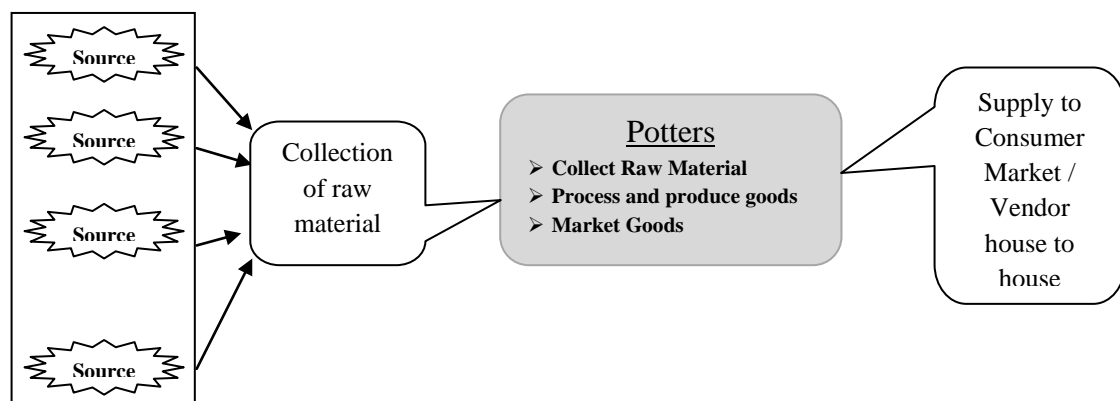
**Table 05.a:** Contrast between TCPU and MEPP considering Human capital

Criteria	Contrast between TCPU and MEPP considering Human capital
<b>Potential Workforce</b>	Though both the area have had large potential productive workforce considering the productive age group, MEPP utilizes the labor potential better having less unemployment specially considering the female group.
<b>Livelihood Adaptability</b>	There has been a tendency to shift from pottery to other profession in both the areas though it is higher in the MEPP areas. This shifting has been mostly a younger male occupational group's phenomenon which delineates the reluctance of the younger generation to take over the traditional cast based pottery as their profession.
<b>Educational Status</b>	Academically, both in schooling years and female education, TCPU area have less status then MEPP, especially in the case of Higher education.

#### 5.2.4. Social Capital

*Social capital* in the form of diverse networks, social claims, and social relations helps people to pursue different livelihood strategies. It is evident in the study area as well. Different pottery production units, depending on their own strategy, culture and tradition shape the holistic idea of pottery production and marketing cycle. Both the TCPU and MEPP have been following different path to adopt pottery as a business and in this way social capital plays an important role.

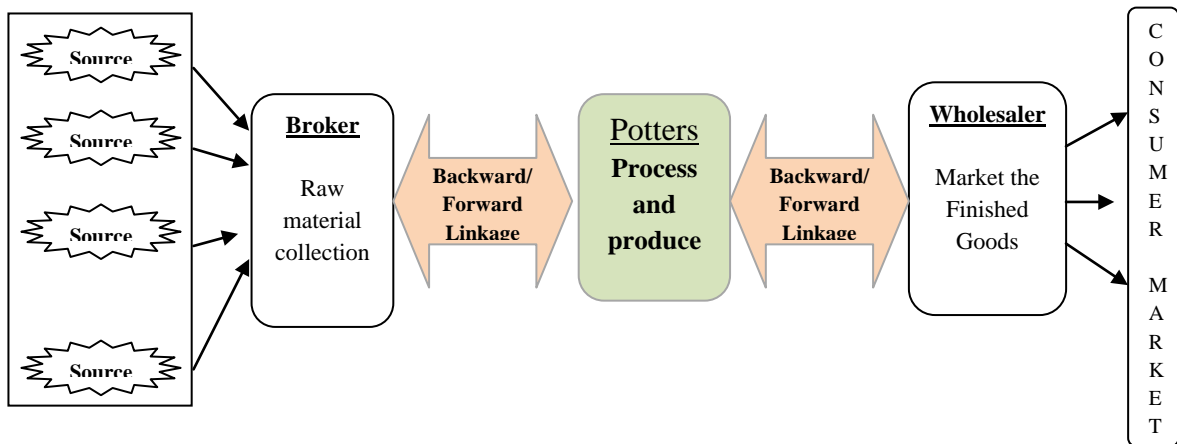
While collecting the raw material, TCPU usually form a group and work together to collect clays from the field. As pottery demand much costly establishment and spacious area to process and stock raw material many of the assets like yards, burner, tube well etc. have been shared within two or more households. This has been the output of the social relation and professional bond in the TCPU area. As mentioned in the Map 03 the TCPU have been marketing the product in the local markets. Yet the potters also have been vendor house to house within their threshold area to the local people to market the pottery good. In many of the cases for different occasion like marriage, national occasion the local people has ordered pottery goods. In this total process social relation has playing a very impotent role.



**Figure 08:** Pottery production process in TCPU

On the other hand, MEPP use backward linkage to collect the raw materials for pottery production and forward linkage to market the finished goods to the market. This networking have been one of the significant advantage MEPP has over TCPU as back ward linkage have secured quality raw material supply to the production units while forward linkage have saved the time for marketing which eventually have been adding

extra time in pottery production. These networking also have given the MEPP units financial flexibilities as the production units had not have to invest in the cost of raw material and also in many cases the dealers have provided advance cash for the pottery goods. This networking has also been letting the MEPP units to participate in the broader market with greater demand. Like the TCPU, MEPP as well use common assets for pottery production.



**Figure 09:** Pottery production process in MEPP

Therefore, taking into account the existing social capital, TCPU and MEPP have had significant differences in applying the social capital in the pottery industrial context. TCPU’s approach has been more traditional while MEPP use social capital as a way to make the production and marketing process much functional and productive.

#### 5.2.5. Financial Assets

Financial capital including financial institutions i.e. bank, income, expenditure and savings pattern in the locality, external supports and supplies of credit, along with government policy, structure and strategy is one of the central cartelist to shape a livelihood portfolio in a community. The existing income, expenditure and savings pattern act as the internal strength of a community to adept a livelihood while the government policy, structures and strategies plays an important role to ensure accessibility to livelihood resources. The more a community strong in economic perspective, usually more potential for secure investment in a livelihood.

Thus to explore the financial capital in the study area within different pottery unit the income, expenditure and savings pattern have considered as an important factor.

*Income and expenditure pattern*

Considering the income and expenditure pattern of the MEPP and the TCPU it have been found that, MEPP have much balanced state over TCPU. There have been a big gap in the per capita income considering TCPU and MEPP i.e. BDT 1763 and 2537 BDT respectively. The contribution of the pottery as livelihood option has also been found greater in MEPP over TCPU i.e. 76 percent and 49 percent. Considering the income and expenditure situation, it have been found that TCPU run with a deficit budget of BDT 472 per capita (Per capita income minus Per capita expenditure) while MEPP have had saving about BDT 296 per capita.

**Table 06:** Income and expenditure pattern of TCPU and MEPP

Units	Total population	Income		Income from pottery		Expenditure	
		Total	Per Capita	Amount	% (Total Income)	Total	Per Capita
<b>TCPU</b>	92	118815	1763	57723	49	162223	1291
<b>MEPP</b>	75	190242	2537	145242	76	168071	2241

Source: Annex 06.

Note: Amount is in BDT (1 USD = 81.84003 BDT on July 2012)

To maintain the expenditure, the potters involving in TCPU thus have to compromise their time in other smaller informal activities like fishing, collecting wild vegetable and collection of firewood from the surrounding. This eventually limits the production potential of the unit as a whole reducing potential labor in the locality. The informal collection and gathering activities have primarily done by the women in the potter community. This might be the dominant reason why the unemployment rate among women considering TCPU has been the highest. With already a deficit budget it has been also hard for the units in the TCPU to invest in raw material and production process. They primarily have had to depend on local or institutional loan system.

MEPP, on the other hand, have been able to invest some of the saved amount to the business. So with a self and secure investment pattern MEPP have been facing less hardship to manage the investment in the raw materials and production process. An

increased expenditure in a locality eventually improve the way of life contributing in the food habit, education, and help to develop better capability of the individuals. Therefore, considering the table it is clear that pottery as an industry have been well established in the MEPP comparing to TCPU and internal capital flow have been greater in the MEPP units.

*Investment requirement and management system*

Pottery industry whether it is cottage industry or micro scale industry, usually need some investment. Most of the investment goes over collecting and processing raw material, fixed and operational cost (cost of the pottery making machine, land rent, power, etc.), transport etc. The average investment in 15 surveyed TCPU has been BDT 1732 in contrast of monthly average investment 16420 in MEPP. With much less investment TCPU though can manage to have more Benefit-cost ratio i.e. 3.13 in TCPU while 1.76 in MEPP.

**Table 07:** Income, Investment and Benefit-Cost Ratio of TCPU and MEPP

TCPU (Monthly in BDT)				MEPP (Monthly in BDT)			
Investment	Total Income	Average Investment	BCR <sup>1</sup>	Investment	Total Income	Average Investment	BCR <sup>1</sup>
25985	81333	1732	3.13	197042	346283	16420	1.76

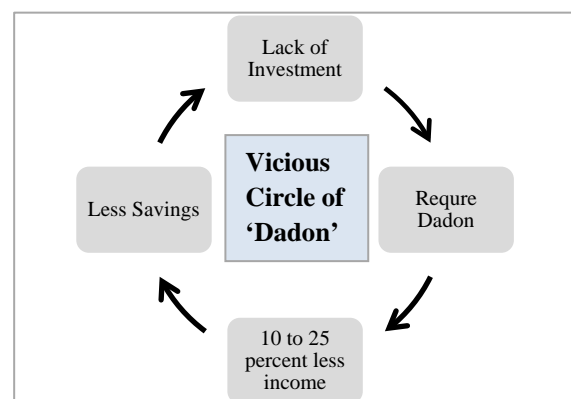
Source: Field Visit, 2012.

<sup>1</sup>BCR- Benefit-Cost Ratio

Note: Amount is in BDT (1 USD = 81.84003 BDT on July 2012)

There has been found different financial management system in the study area both in TCPU and MEPP. The overall sources of financial capital are given in the next section:

**‘Dadon’:** It is a popular system to attract capital investment for the pottery production units. In this system client or the broker have offered cash in advance to the production units as the capital investment and have demanded 10 percent to 25





percent reduction in the price of the final product. This option have been providing two basic advantage i.e. have served cash capital for the production and marketing cost and have ensured selling of final products in advance. Despite of its advantage this ‘Dadon’ system creates a vicious circle which allows the market brokers or the middle man to earn extra 10 percent to 25 percent income.

To acquire production cost both types of Units TCPU and MEPP have taken dadon from the buyers or the brokers. In TCPU 5 out of 15 units have acquired *dadon* from the buyers while in MEPP 3 out of 12 have taken it in the previous year (Field visit, 2012).

**Bank Loan:** Bank loan both from traditional bank and micro-credit have been another popular option to require the production costs. Though Government of Bangladesh have declared MSME as a prioritized sector and sanction loan package through Bangladesh Krishi Bank, Proshika, BSCIC and other public banks but the inefficiency in the banking system have taken a long period of time some times more than 6 month period while the pottery production unit usually need it in urgent basis. So, technically the pottery production units could not depend on the public loaning system.

Instead of the public system, thus the production units mostly depends on the micro-finance system put forth by different NGOs e.g. Grameen Bank, Brack Bank, Gana Unnayan Kendra (GUK). This mostly because the system can provide credit within one month though the interest rate is much greater than the public loaning system.

Considering the study area, among 15 TCPU, 6 of them have been withdrawn loan from micro-credit system while in the MEPP 4 out of 12 have taken the loan (Field visit, 2012).

Most of the pottery units in TCPU and MEPP have been depended on the self investment process. This may the basic reason of the huge difference in investment pattern within TCPU and MEPP.

### **5.3. Pottery Production and Marketing Process in Different Group**

Pottery production and marketing process can be separated into seven different steps as:

- Step 01:** Collection of Raw Material
- Step 02:** Processing of raw clay
- Step 03:** Clay modeling and shaping
- Step 04:** Sun drying and designing
- Step 05:** Burning in the kiln
- Step 06:** Decorating the final product
- Step 07:** Product Marketing

***Description and collection of raw material:*** The materials that are used in production of pottery can be classified in to two broad groups. First type has been the stationary assets and tools that have used to make the pottery good. This type has included the workshop where potters have done their clay modeling, a yard or open place with the access to sun light where initially shaped products have dried, a wheel which has used to model the clay, a kiln to burn the initially modeled pottery product, different tools like husks, hammers, and bowls.

The second group has been the raw materials used in the production of pottery goods. The most significant raw material has been the clay. There has been different type of clay used by the potters for different purpose. According to *Shachindra Chandra Pal*, a potter from *Pal Para village, Mirzapur* the potters usually need three types of soil i.e. ‘Athaila Mati’ (Sticky clay) which they usually collect from the adjacent river bed or from ‘*Boro Paddy field*’, ‘Bali Mati’ (sandy soil) which they collect from the river bank, and ‘Kosh Mati’ (colored soil) which they perches from the market. Among these three the main ingredient for the pottery has been the sticky clay. The potters use a mix of sticky clay and the Sandy soil to prepare fine clay which has used to produce pottery goods.

The collection of quality clay is prone to seasonal variation. Only in certain period of the year the quality clay could be collected. According to Jogesh Pal, a potter from Pal para village, Mirzapur the sticky clay they collect at Bangla ‘Boishakh’ month (April 14 to May 14) while they collect sandy soil and colored soil at rainy season (from mid-June to mid- August). The potters have collected and stocked the clay for whole year in the yard. This is one dominant reason why potters need specious workshops.

Considering the TCPU and MEPP the raw material collection process has been different. While in the MEPP the collection of the raw material depends on the backward linkage with the broker who supplied the clay with the demand. This backward linkage gives two specific benefits to the MEPP production units. Initially it has saved the time potters usually put into collecting raw material. So the potters in the MEPP have had some extra production hour in this process. On the other hand, cost of clay has been one of the dominating investments in the pottery production. According to the **Table** overall 46 percent of the production cost has been engaged in collection of clay. 46 percent cost production has been engaged in clay considering MEPP while 47 percent from in TCPU.

**Table 08:** Cost of production in TCPU and MEPP

Production units	Major Investment (Monthly in BDT)				
	Total	Clay <sup>1</sup>		Firewood <sup>1</sup>	
		Amount	Percentage	Amount	Percentage
TCPU	25985	12260	47	13725	53
MEPP	1816875	828750	46	988125	54
<b>Total</b>	<b>1842860</b>	<b>841010</b>	<b>46</b>	<b>1001850</b>	<b>54</b>

Source: Field Visit, 2012.

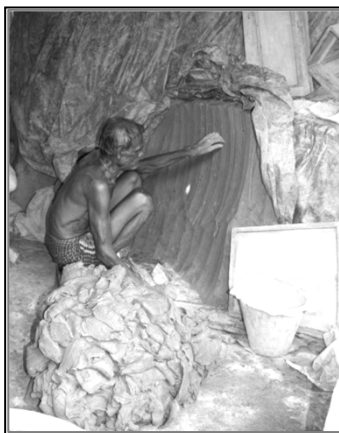
Note: Amount is in BDT (1 USD = 81.84003 BDT on July 2012)

<sup>1</sup> the amount include the total cost of collection, transportation and primary processing.

The costs of clay collection in the MEPP units have been shared by the brokers who have supplied the clay. They have collected the money yearlong after every supply of the final product to the market by the pottery unit. Thus backward linkages have been helping the MEPP by providing extra work hour and also by sharing the investments. But the broker has also been sharing the profit of the pottery work. Thus a portion of the profit has gone to the brokers who supply clay. This might be one of the reasons why MEPP has had less BCR (1.76) than the TCPU (3.13).

The collected raw material has been stored in the yard under a shed with a cover. Usually the potters in the both area MEPP and TCPU have collected the clay once in a year. Thus the storing has required area. Both types of the units have mentioned that for pottery production they have limited spaces and in some cases this lack of space affect negatively in the production system.

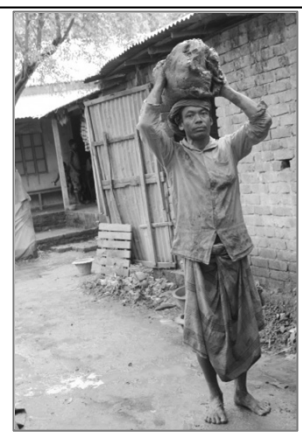
**Processing of raw material:** The raw clay needs be processed for the pottery production. This process has included Wedging and Throwing process. The collected clay usually is not enough smooth and sticky for the earth work. The raw clay then has soaked with water and smashed to break the big part of the clay and make a mold of clay. Both TCPU and MEPP have found to process the clay in same way. This is called the Wedging process. However, as the production size in MEPP has been much bigger than the TCPU, MEPP include day laborer to help them to process the clay.



Picture 01



Picture 02



Picture 03

**Pictures 07:** Processing of Clay for pottery production; Picture 01- Preparation for throwing; Picture 02- Wedging; Picture 03- Day labor engage in clay processing.

Source: Field Survey, 2012

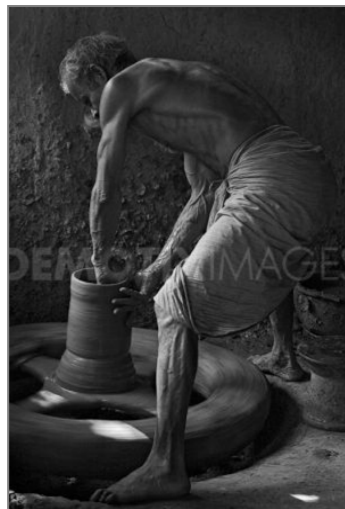
In the Table 09 it is evident that MEPP have been absorbing on an average 4 person days/month-per units labor in the locality. A total of 472 person-days / month have been recorded as labor absorption amount which have served the locality significantly with per time employment. Most of the clay processing has demanded unskilled day laborer only to process the clay in suitable situation. Then the potters have prepared the clay by final wedging and throwing process. Pictures 07 have been sowing the activities in different phase of the clay preparation. After the clay processing phase the clay is finally ready for modeling and shaping.

**Table 09:** Labor absorption in clay processing in TCPU and MEPP

Production units	Worker engaged in Clay processing		
	Number of Unit Surveyed	Total Labor Absorption (Person- day /month)	Average Labor Absorption by units (Person-day /month)
TCPU	15	2	0
MEPP	12	37	4

Source: Field survey, 2012.

**Clay modeling and shaping:** There are several methods of modeling shaping considering pottery i.e. hand building, the potter’s wheel, Granulate pressing, Injection moulding, Jiggering and jolleying, Roller-head machine. In the study area both in TCPU and MEPP the dominant method of shaping have been ‘*The Potter’s Wheel*’. In the MEPP it has been the lone shaping method used and in TCPU some of the product has also used ‘*Hand Building*’ method. TCPU have been using the traditional wooden potter’s wheel while the MEPP use a slightly modified foot-spinning wheel which allows more flexibility to the potters.



Picture 01



Picture 02

**Pictures 08:** Use of different type of Potter’s Wheel; Picture 01- Traditional wooden hand-spinning wheel; Picture 02- Contemporary foot-spinning wheel.

Source: Demotix, 2009 and Field Survey, 2012

**Sun drying and designing:** After has been being done with the shaping the potter’s has put these in the open area with sunshine for sun-drying. This process made the soft primary shapes hard enough to handle for design. After drying in the sun for about 3 hour

the products have been then designed with the knife and sticks. Then the products have been colored with the colored soil and finally have been ready to put in the kiln.



Picture 01

Picture 02

Picture 03

**Pictures 09:** Sun drying and designing and storing of pottery goods; Picture 03- Sun drying; Picture 02- Designed tub; Picture 01- Storing after designing and coloring.

Source: Field Survey, 2012

**Burning in the kiln:** The kiln potters use is varied within the size. Some of it can contain up to 5000 pieces of products while others can have less than 1000 products. Both of the community MEPP and TCPU have been found to share the kiln. The potters in the study area use firewood, straws to light the fire in the kiln. Cost of the firewood has been the **dominant** cost that the potters have to invest in the production process. According to the *Table 08*, 53 percent of the total cost of production in TCPU has been engaged in firewood while 54 percent have been engaged in the MEPP.



Picture 01

Picture 02

**Pictures 10:** Different size of kiln used in the study area; Picture 01- Arranged Pottery product just before burning in the kiln. Picture 02- Big kiln with pottery product.

Source: Field Survey, 2012

Both in the MEPP and TCPU it has been found that two or more units have been sharing a same kiln. This is mostly because to share the cost of the firewood. This also have been delimited the social relationship within the potters in the both of the areas.

**Decorating the final product:** After the burning, the pottery products have been taken out and have decorated with colors, paints, glitters and designs to give it more attractive look for the final marketing. After this phase the final goods are ready to market. Both MEPP and TCPU follow almost the same procedure considering this step.

**Product Marketing:** Considering the study areas, this has been the production phase where MEPP and TCPU have been totally different system from each other. TCPU usually market traditional cottage based units usually market the goods in the market places by themselves. As mentioned in the Map 03 the TCPU have been marketing the product in the local markets. To do so they have to include person-day labor to market the final product.

**Table 10:** Days engages in the Marketing of final Product by the potters in TCPU and MEPP

Production units	Days engages in the Marketing of final Product by the potters		
	Number of Unit Surveyed	Days engages in marketing (Person- day /month)	Average Days engages in marketing (Person-day /month)
TCPU	15	65	4.34
MEPP	12	0	0

Source: Field Survey, 2012

According to the *Table 10*, TCPU, on an average have been engaged 4.34 days per month to market the final pottery goods in the local markets. Yet the potters also have been vendor house to house within their threshold area. As they have managing the marketing by themselves, the option remains limited for the pottery units in the TCPU to reach to the broader markets with diverse product. Though the self-marketing system have been serving the TCPU with large BCR but it have been limiting the production level and also cost a significant amount in the marketing process.

On the contrary, MEPP have been marketing the finished goods by consulting the wholesaler or dealers who have been marketing the goods to the consumers. So in this process the units have not had to engage themselves to the marketing; which have been allowing the MEPP units to expand their production level comparing with TCPU. With the help of the wholesaler MEPP also can reach to the broader market with greater demand and have secured the investment return. With this marketing process the MEPP had to sacrifice a portion of



**Picture 11:** Potters as street vendor.

Source: Field Visit, 2012.

profit to the wholesaler or dealers. According to Ratan pal from Kaguzipara, Dhamrai, the potters have to sacrifice around 10 percent to 25 percent of the profit to the wholesaler which have been perhaps the main reason of lower BCR in MEPP (1.76 according to *Table 07*) comparing to the TCPU (3.13 according to *Table 07*).

#### 5.4. Problems and possible solutions: Community perspective

During the data collection phase, the potters have been asked to mention the problems and possible solution of the problems concerning different level of pottery production i.e. Investment, Collection of raw materials, Production of goods, Marketing of goods. Most of them responded with their own view about different problems and the possible solution. A complete account has given below:

**Table 11:** Community perspective towards different problems and their possible solution

Production Phase	Related Problems.	Possible Solution
Investment	<p>1.Lack of source for investment accumulation both in TCPU and MEPP.</p> <p>a) Accessibility to public loan through bank or government authorities has been low and processing is time</p>	<p>a) Public loan system should be simplified and user friendly and loan processing time should be reduced to less than 30 days.</p>



	<p>consuming both in MEPP.</p> <p>b) Other than self investment TCPU has limited option for lone accumulation. Some NGOs through micro-credit provide lone but eventually this loan put extra pressure on the HH and production unit.</p>	<p>b) Co-operative among the pottery production which with the government support can improve the capital flow in the pottery production.</p>
<b>Collection of Raw Materials</b>	<p>2. Seasonal variation in the accessibility to resources.</p> <p>a. Important raw material i.e. clay is not available year long. Only a limited time period it is available. So the production unit needs to collect and store it for the year long which needs bigger investment and more spaces to store.</p>	<p>a) A central collection and storing process administrated by the local government can be helpful in this regard.</p> <p>b) Co-operative with pottery units in the community can also collect, store and distribute it.</p>
<b>Pottery production</b>	<p>1. Species workshop now a day a problem which is a primary requirement for the pottery production in both the Areas TCPU and MEPP.</p> <p>2. Still the kiln and the pottery burning process remain traditional with firewood which is detrimental to environment as well as costly.</p>	<p>1. Local government can provide a common area for the potters so that the potters should not have to rent or have a big workshop on their own.</p> <p>2. Local government could provide a electric of gas kiln nearby to solve this process.</p>
<b>Marketing</b>	<p>1. Self-marketing system in TCPU limit the scope for reaching broader market with greater demand.</p> <p>2. In MEPP a major share of profit have gone to the wholesaler which deprives the potter community with lower profit level.</p>	<p>1. A co-operative with a marketing unit could be helpful to reach to new markets.</p>

## **5.5. Conclusion**

Various information regarding the capital resource base of the study areas has been identified and discussed here in this chapter. The data and the information enlisted here id the base for the further analysis.

### 6.1. Introduction

Focusing on the information collected and presented in the chapter five a logical analysis of the relevant strength and weakness of TCPU and MEPP have been constructed in this section. The analysis has been based on the SWOT (Strength, Weakness, Opportunity and Threat analysis) analysis. Considering the result of SWOT analysis, potentialities and constrains in different units have been identified which have depicted the potentialities of TCPU and MEPP for further scaling up of the production unit.

This chapter has also delineated some recommendation considering the existing situation of the study area.

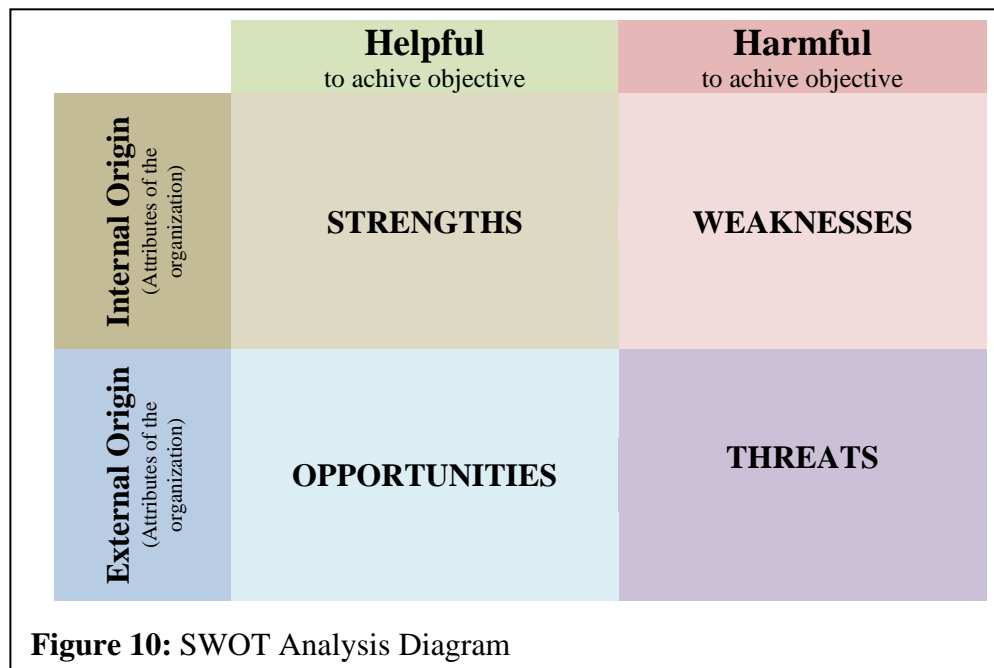
### 6.2. An overview of SWOT analysis

A SWOT analysis is a tool developed by Albert Humphrey within 1960s to 70s which facilitates to evaluate the *Strengths, Weaknesses, Opportunities, and Threats (SWOT)* involved in any business enterprise. By providing insights into the past, SOWT analysis can help a production unit to identify existing or potential problems with possible solutions. This tool usually adopted in a workshop ensuring the participation of different stakeholder directly involved in the process.

As stated in the chapter five, different stakeholder in the study area i.e. potters engaged in TCPU, Potters engaged in MEPP, have given the information about the pottery industry in different units mentioning relative strengths, weaknesses, opportunities, and threats in the study area. By using the SWOT the collected information have been sorted and analyzed to have an insight about the existing problems and possible solutions for scaling up of the current pottery production units.

The primary objective of SWOT analysis is to identify the major internal and external factors which are important to reach the objective. Thus it organizes the information based on mainly two categories i.e. internal factors and external factors. *Internal factors* are the list of *strengths* and *weaknesses* internal to the organization while external factors present the *opportunities* and *threat* the organization have as externalities. The

understanding toward internal *strengths* and *weaknesses* together with the external *opportunities* and *threat* delineates the areas of concern regarding a decision.



According to SWOT concept, the strengths are defined as the attribute of an enterprise or production units that provides priority over the others while the weaknesses are described as the disadvantage that the unit have respectively. It views strengths or weaknesses as internal factors of the units which can be managed though decision making initiative. Various strengths and weaknesses depict the capability of a production units including diverse capital base of the units.

**O**pportunities are seen as the external process, elements, resources that the unit can utilize while the threats are defined as elements that could affect negatively in the production process. This includes the vulnerability context of a unit as well as the existing systems and structures, policy and strategy, technological advancement and laws.

This analysis then by setting some simple cross dimensional method helps the unit to reach to an objective. While setting the objective some general guideline is maintained i.e. Opportunity-Strength Strategies- Use of strengths of a unit to take advantage of the opportunities; Threat-strength Strategies- Use strengths to avoid threats; Opportunity-Weakness Strategies- overcome weakness by taking advantage of opportunities. Threats-weakness strategy- minimizes weaknesses and avoids threats.

To analyze the information collected, SWOT has been central tool. The information regarding the livelihood capital base along with vulnerability context and existing policy and structures, various strength, weaknesses, opportunity and threats have been identified and listed under the SWOT analysis system. This understanding have eventually been constructed the potentiality and the constraints of the different pottery units of the study area for scaling up.

### **6.3. SWOT analysis of TCPU and MEPP**

With the help of the information mentioned in the chapter five the relative strengths, weaknesses, opportunities and threats have been identified for the TCPU and MEPP. *Table 12* and *Table 14* have shown the list of the relative strengths, weaknesses, opportunities and threats that have been identified for the TCPU and MEPP. Considering these aspects the strategic matrix of SWOT is derived for the TCPU and MEPP which have been shown in the *Table 13* and *Table 15*. The strategies for the development of the TCPU are:

#### **6.3.1. Strategies for the best utilization of Opportunity-Strength for TCPU**

1. Utilize maximum skilled worker to increase production by taking the benefit of the favorable policy of government towards MSME development and make pottery a potential option as MSME.
2. Maximize the production by using the supply of cash providing by the NGOs.
3. Take the opportunity of government liberal policy to improve the access to the raw material, credit system.

TCPU have had overall 21 percent of unemployment in the productive group most of which are in female group. By utilizing this unemployed section of skilled worker have the potentiality to increase the production within TCPU. By utilizing the opportunities like government strategy to MSME development in term of loan, infrastructure and other benefits, and the micro-credit availability from different NGOs, the investment flow could be increased and better output performance form MEPP can be achieved. Obviously, function it properly the efficiency of service and accessibility to government credit system have to be ensured. A strict control over micro-credit system performance focusing on poor oriented strategies area also required.

**Table 12:** Relative Strengths, weaknesses, Opportunities and Threats of TCPU

Internal Origin		External origin	
Strengths	Weaknesses	Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Availability of skilled worker with the present unemployment and underemployment rate.</li> <li>2. Comparatively good Benefit-Cost Ratio (BCR)</li> <li>3. Good accessibility to raw materials.</li> <li>4. Have been absorbing a major part of labor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Higher level of under employment.</li> <li>2. Lack of investment source.</li> <li>3. Self-marketing require labor and limit accessibility to broader markets.</li> <li>4. There have been no backward and forward linkage supporting.</li> <li>5. Lack of institutionalization.</li> </ol>	<ol style="list-style-type: none"> <li>1. Favorable policy of government regarding MSME development.</li> <li>2. NGO banks catering fast and immediate supply of cash for cost of production.</li> </ol>	<ol style="list-style-type: none"> <li>1. Pottery goods have been replaced by the substitute goods.</li> <li>2. Lack of proper linkage to exploit government liberal policy, credit and loan system.</li> <li>3. Large processing time for public loan from Governmental credit system.</li> </ol>

**Table 13:** Relative Strategies to overcome the weakness and threats utilizing the strength and opportunities in TCPU

<p style="text-align: center;"><b><u>Opportunities for development of TCPU</u></b></p> <ol style="list-style-type: none"> <li>1. Favorable policy of government regarding MSME development.</li> <li>2. NGO banks catering fast and immediate supply of cash for cost of production.</li> </ol>	<p style="text-align: center;"><b><u>Threats for development of TCPU</u></b></p> <ol style="list-style-type: none"> <li>1. Pottery goods have been replaced by the substitute goods.</li> <li>2. Lack of proper linkage to exploit government liberal policy, credit and loan system.</li> <li>3. Large processing time for public loan from Governmental credit system.</li> </ol>	
<p style="text-align: center;"><b><u>Strengths of existing TCPU</u></b></p> <ol style="list-style-type: none"> <li>1. Availability of skilled worker with the present unemployment and underemployment rate.</li> <li>2. Comparatively good Benefit-Cost Ratio (BCR)</li> <li>3. Good accessibility to raw materials.</li> <li>4. Have been absorbing a major part of labor.</li> </ol>	<p style="text-align: center;"><b><u>Opportunity-Strength Strategies for TCPU Development</u></b></p> <ol style="list-style-type: none"> <li>4. Utilize maximum skilled worker to increase production by taking the benefit of the favorable policy of government towards MSME development and make pottery a potential option as MSME.</li> <li>5. Maximize the production by using the supply of cash providing by the NGOs.</li> <li>6. Take the opportunity of government liberal policy to improve the access to the raw material, credit system.</li> </ol>	<p style="text-align: center;"><b><u>Threat-Strength Strategies for TCPU Development</u></b></p> <ol style="list-style-type: none"> <li>1. Promotion of pottery goods as a green and economic product with the recommendation of government environmental policy and MSME development strategy.</li> <li>2. Organize the of potter community by forming organizations or co-operative to advocate local demand to the policy level.</li> </ol>

<b><u>Weaknesses of existing TCPU</u></b>	<b><u>Opportunity-Weakness Strategies for TCPU</u></b>	<b><u>Threats-weakness Strategy for TCPU</u></b>
<ol style="list-style-type: none"> <li>1. Higher level of under employment.</li> <li>2. Lack of investment source.</li> <li>3. Self-marketing require labor and limit accessibility to broader markets.</li> <li>4. There have been no backward and forward linkage supporting.</li> <li>5. Lack of institutionalization.</li> </ol>	<p style="text-align: center;"><b><u>Development</u></b></p> <ol style="list-style-type: none"> <li>1. Improve the investment option utilizing favorable government policies and cash flow through NGOs.</li> <li>2. Improved investment is expected to lower the level of underemployment and unemployment.</li> <li>3. Involvement of local government in the production cycle and marketing.</li> <li>4. Develop backward linkage to secure flow of quality raw material and forward linkage for marketing.</li> <li>5. With the help of the local government and social welfare department develop collective effort to face the production and marketing weakness.</li> </ol>	<p style="text-align: center;"><b><u>Development</u></b></p> <ol style="list-style-type: none"> <li>1. Securing improved investment options to scale up the production and create more job options in the locality.</li> <li>2. Minimize the self-marketing scale with the same level of production.</li> <li>3. Facilitate institutionalization though which development of backward and forward linkage will be easier.</li> <li>4. Improve accessibility to the public credit system with greater accessibility and efficiency in the service.</li> </ol>



### 6.3.2. Strategies for overcome weakness utilizing the opportunity for TCPU Development

1. Improve the investment option utilizing favorable government policies and cash flow through NGOs.
2. Improved investment is expected to lower the level of underemployment and unemployment.
3. Involvement of local government in the production cycle and marketing.

As MSME is recognized as a priority industrial sector by the Bangladesh Government, the local government units can provide some services to the productive communities. For the potter community, local government can initiate an integrated approach involving public officials, respective development organization and local community to improve the cash flow for production cost, providing a central place for collection, store and market pottery goods.

4. Develop backward linkage to secure flow of quality raw material and forward linkage for marketing.

By developing the backward and forward linkage the efficiency in production can be increased in the TCPU and it is also a way to reach to broader market with greater demands. It must be considering the effect the linkage has on the Benefit-Cost Ratio (BCR).

5. With the help of the local government and social welfare department develop collective effort to face the production and marketing weakness.

The collective effort within the productive community is impotent as it can advocate strongly to the authorities about the problems and the weakness they had and solution they need. By forming co-operatives under the social welfare department of Bangladesh is one of the options. Then the co-operative can act as the backward and forward linkage of the production units.

### 6.3.3. Strategies for avoiding the threat utilizing the strength for TCPU Development

1. Promotion of pottery goods as a green and economic product with the recommendation of government environmental policy and MSME development strategy.

By enlisting earthenware as a green product comparing to its substitute like plastic ware, metallic ware, etc. the demand for the pottery could be developed and in this regard the government environmental strategies and MSME development strategy can be utilized.

2. Organize the of potter community by forming organizations or co-operative to advocate local demand to the policy level.

#### 6.3.4. Strategies for avoiding threat and minimizing weaknesses for TCPU Development

1. Securing improved investment options to scale up the production and create more job options in the locality.
2. Minimize the self-marketing scale with the same level of production.
3. Facilitate institutionalization through which development of backward and forward linkage will be easier.
4. Improve accessibility to the public credit system with greater accessibility and efficiency in the service.

The strategies for the development of the MEPP are:

#### 6.3.5. Strategies for the best utilization of Opportunity-Strength for MEPP

1. Maximize production utilizing existing resource base exploiting the opportunities like favorable government policy, loan from the micro-credit by the NGOs and comparatively good transportation system.
2. Ensure secure and cheap source for quality raw material with the help of the local government and the development organizations.

Cost of raw material is one of the significant costs that lower the BCR of MEPP. An integrated approach in collaboration with government and development agencies could minimize the cost of collection of raw materials.

3. Take the opportunity of government liberal policy to improve the access to the raw material, credit system.
4. Change the nature of the backward and forward linkage including government organization and development organization to make it more attractive and cost effective.

**Table 14:** Relative strengths, weaknesses, Opportunities and Threats of MEPP.

Internal Origin		External origin	
Strengths	Weaknesses	Opportunities	Threats
<ol style="list-style-type: none"> <li>1. Availability of skilled worker with the present unemployment and underemployment rate though limited comparing to TCPU.</li> <li>2. Comparatively moderate accessibility to raw materials.</li> <li>3. Have been utilizing major part of the local labor related to pottery.</li> <li>4. Prevalence of backward and forward linkage.</li> <li>5. Accessibility to broader market with greater demand.</li> <li>6. Better internal capability to manage cost of production.</li> </ol>	<ol style="list-style-type: none"> <li>1. Benefit-Cost Ratio (BCR) is low comparing to TCPU.</li> <li>2. Lack of investment source though better condition considering TCPU.</li> <li>3. Lack of institutionalization and institutional linkage.</li> <li>4. Significant share of profit goes to the wholesaler or broker.</li> <li>5. Lack of spaces for workshop and storing of raw materials.</li> <li>6. Dependency on forward linkage to reach to the broader market.</li> <li>7. High rate of shifting of profession from Pottery to others especially in productive male group.</li> </ol>	<ol style="list-style-type: none"> <li>1. Favorable policy of government regarding MSME development.</li> <li>2. NGO banks catering fast and immediate supply of cash for cost of production.</li> <li>3. Accessibility to good transportation system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Pottery goods have been replaced by the substitute goods.</li> <li>2. Lack of proper linkage to exploit government liberal policy, credit and loan system.</li> <li>3. Large processing time for public loan from Governmental credit system.</li> </ol>

**Table 15:** Relative Strategies to overcome the weakness and threats utilizing the strength and opportunities in MEPP.

<p><b><u>Opportunities</u></b></p> <ol style="list-style-type: none"> <li>1. Favorable policy of government regarding MSME development.</li> <li>2. NGO banks catering fast and immediate supply of cash for cost of production.</li> <li>3. Accessibility to good transportation system.</li> </ol>	<p><b><u>Threats</u></b></p> <ol style="list-style-type: none"> <li>1. Pottery goods have been replaced by the substitute goods.</li> <li>2. Lack of proper linkage to exploit government liberal policy, credit and loan system.</li> <li>3. Large processing time for public loan from Governmental credit system.</li> </ol>	
<p><b><u>Strengths</u></b></p> <ol style="list-style-type: none"> <li>1. Availability of skilled worker with the present unemployment and underemployment rate though limited comparing to TCPU.</li> <li>2. Comparatively moderate accessibility to raw materials.</li> <li>3. Have been utilizing major part of the local labor related to pottery.</li> <li>4. Prevalence of backward and forward linkage.</li> <li>5. Accessibility to broader market with greater demand.</li> <li>6. Better internal capability to manage cost of production.</li> </ol>	<p style="text-align: center;"><b><u>Opportunity-Strength Strategies for MEPP Development</u></b></p> <ol style="list-style-type: none"> <li>1. Maximize production utilizing existing resource base exploiting the opportunities.</li> <li>2. Ensure secure and cheap source for quality raw material with the help of the local government and the development organizations.</li> <li>3. Take the opportunity of government liberal policy to improve the access to the raw material, credit system.</li> <li>4. Change the nature of the backward and forward linkage including government organization and development organization to make it more attractive and cost effective.</li> </ol>	<p style="text-align: center;"><b><u>Threat-Strength Strategies for MEPP Development</u></b></p> <ol style="list-style-type: none"> <li>1. Promotion of pottery goods as a green and economic product with the recommendation of government environmental policy and MSME development strategy.</li> <li>2. Organize the of potter community by forming organizations or co-operative to advocate local demand to the policy level.</li> </ol>

<b><u>Weaknesses</u></b>	<b><u>Opportunity-Weakness Strategies for MEPP Development</u></b>	<b><u>Threats-weakness strategy for MEPP Development</u></b>
<ol style="list-style-type: none"> <li>1. Benefit-Cost Ratio (BCR) is low comparing to TCPU.</li> <li>2. Lack of investment source though better condition considering TCPU.</li> <li>3. Lack of institutionalization and institutional linkage.</li> <li>4. Significant share of profit goes to the wholesaler or broker.</li> <li>5. Lack of spaces for workshop and storing of raw materials.</li> <li>6. Dependency on forward linkage to reach to the broader market.</li> <li>7. High rate of shifting of profession from Pottery to others especially in productive male group.</li> </ol>	<ol style="list-style-type: none"> <li>1. Improve the investment option utilizing favorable government policies and cash flow through NGOs.</li> <li>2. Form community organization like Community Based Organization or co-operative to institutionalize the total pottery production and marketing process and build links with the other institutions like art schools for the skill development and knowledge sharing.</li> <li>3. Involvement of local government and other development agencies within the production cycle and marketing to reduce the profit share.</li> <li>4. Develop a system within to reach broader market with the help of the local government and development agencies.</li> </ol>	<ol style="list-style-type: none"> <li>1. Securing improved investment options to scale up the production and create more job options in the locality.</li> <li>2. Facilitate institutionalization though which development and efficiency of backward and forward linkage will be easier.</li> <li>3. Improve accessibility to the public credit system with greater accessibility and efficiency in the service.</li> </ol>

#### 6.3.6. Strategies for overcome weakness utilizing the opportunity for MEPP Development

1. Improve the investment option utilizing favorable government policies and cash flow through NGOs.
2. Form community organization like Community Based Organization or co-operative to institutionalize the total pottery production and marketing process and build links with the other institutions like art schools for the skill development and knowledge sharing.
3. Involvement of local government and other development agencies within the production cycle and marketing to reduce the profit share.
4. Develop a system within to reach broader market with the help of the local government and development agencies.

#### 6.3.7. Strategies for avoiding the threat utilizing the strength for MEPP Development

1. Promotion of pottery goods as a green and economic product with the recommendation of government environmental policy and MSME development strategy.
2. Organize the of potter community by forming organizations or co-operative to advocate local demand to the policy level.

#### 6.3.8. Strategies for avoiding threat and minimizing weaknesses for MEPP Development

1. Securing improved investment options to scale up the production and create more job options in the locality.
2. Facilitate institutionalization though which development and efficiency of backward and forward linkage will be easier.
3. Improve accessibility to the public credit system with greater accessibility and efficiency in the service.

#### 6.4. Recommendation for further actions

Figures have showed constrain concerning TCPU and MEPP respectively and the challenge to develop further. It also shows the possible actions that can be taken to scale up the existing production process. Both the TCPU and MEPP have their own constraints and potentialities. With some initiative within the pottery community and in the governing authority the picture of pottery production can be changed and it can be scale up to a certain level. But to do so, first of all it is important to remove the constraints that have been prevailing within the pottery production units.

##### 6.4.1. Recommendation for TCPU

Primarily in TCPU the main constrains has been the lower supply demand initiated by stagnant marketing condition and inability to reach broader market; Low production level with limited resource input and loan availability and limited involvement of the local government to guide and help the local production units. Thus the principal challenge regarding scaling up the production of TCPU has been:

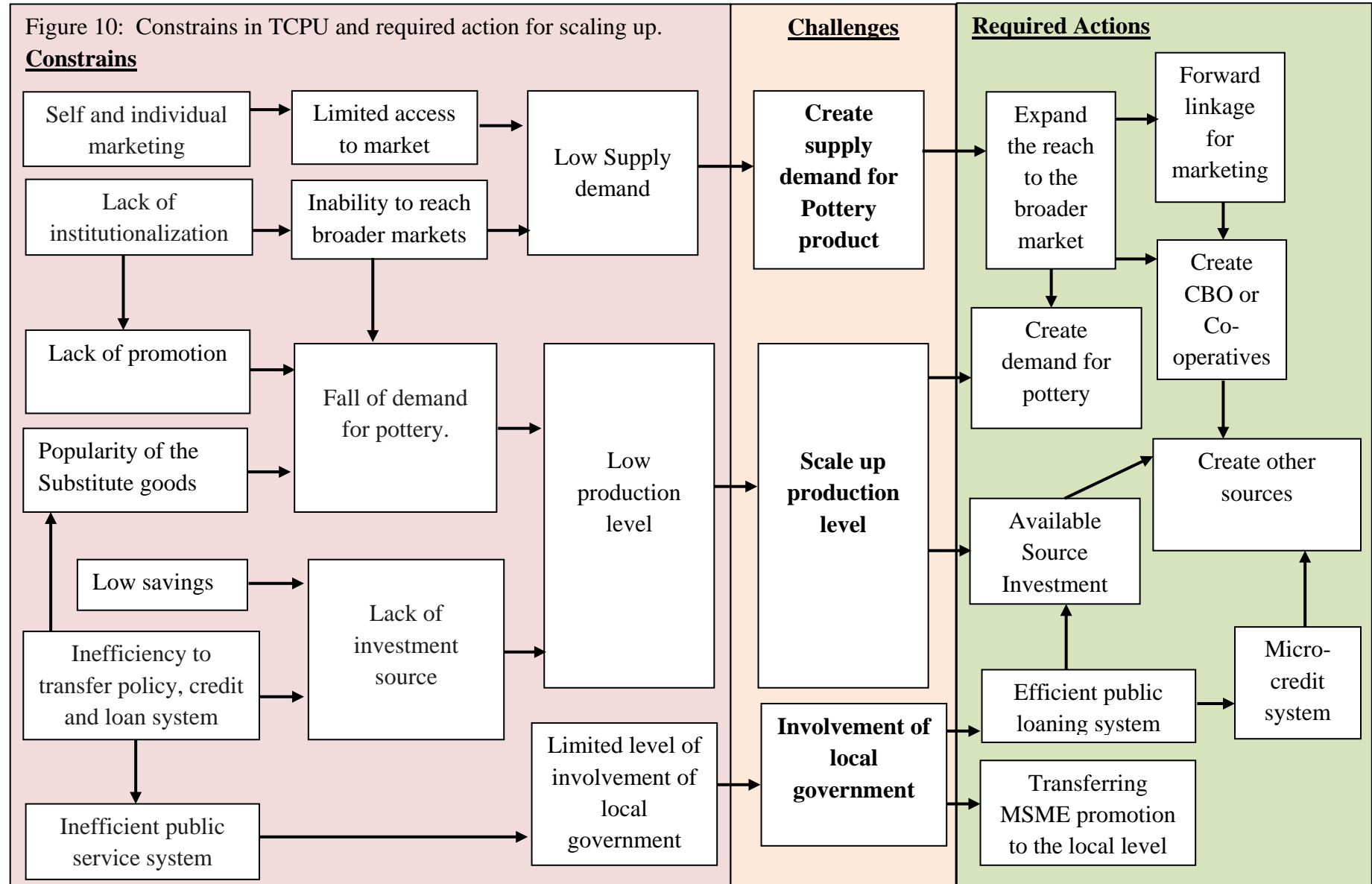
1. Creating supply demand for earthenware
2. Scaling up the production level
3. Involvement of the local government and the other development authorities

First two options can be enforced by the local community but the last one is the government and development agencies who have to contribute a part of it.

**Creating supply demand for earthenware:** As the existing marketing zone have already been covered the only option for further growth in supply demand could be done by expanding it to the broader markets with greater demands. To do so, TCPU should adopt forward linkage process i.e. contact with wholesaler or broker, Create CBO or co-operative by which the marketing can be managed. The best option for the TCPU is to create a collective strategy to market the produced goods which will allow them to expand to the new markets increase the supply demand in this process. Figure shows the illustrative flow how constrains and challenge can be managed by actions.

**Scaling up the production level:** The most important aspect to scale up the production level in TCPU has been the easy access to loan fund for the investment. Local government and public sector can play an important role here by making the loan in easy and efficient way.

Figure 10: Constrains in TCPU and required action for scaling up.





Other NGOs and development organization can also involve with this process. On the other hand by creating a co-operative the local potter community by themselves can manage the production costs.

**Involvement of the local government and the other development authorities:** Though government has favorable MSME promotion policies, it does not implement in the local level. These should be done by the local government. By taking an integrated approach involving pottery group, and other development agencies the local government could help the pottery community with collection and storing of raw material, gas kiln for burning and also infrastructure and transport to reach to the broader market.

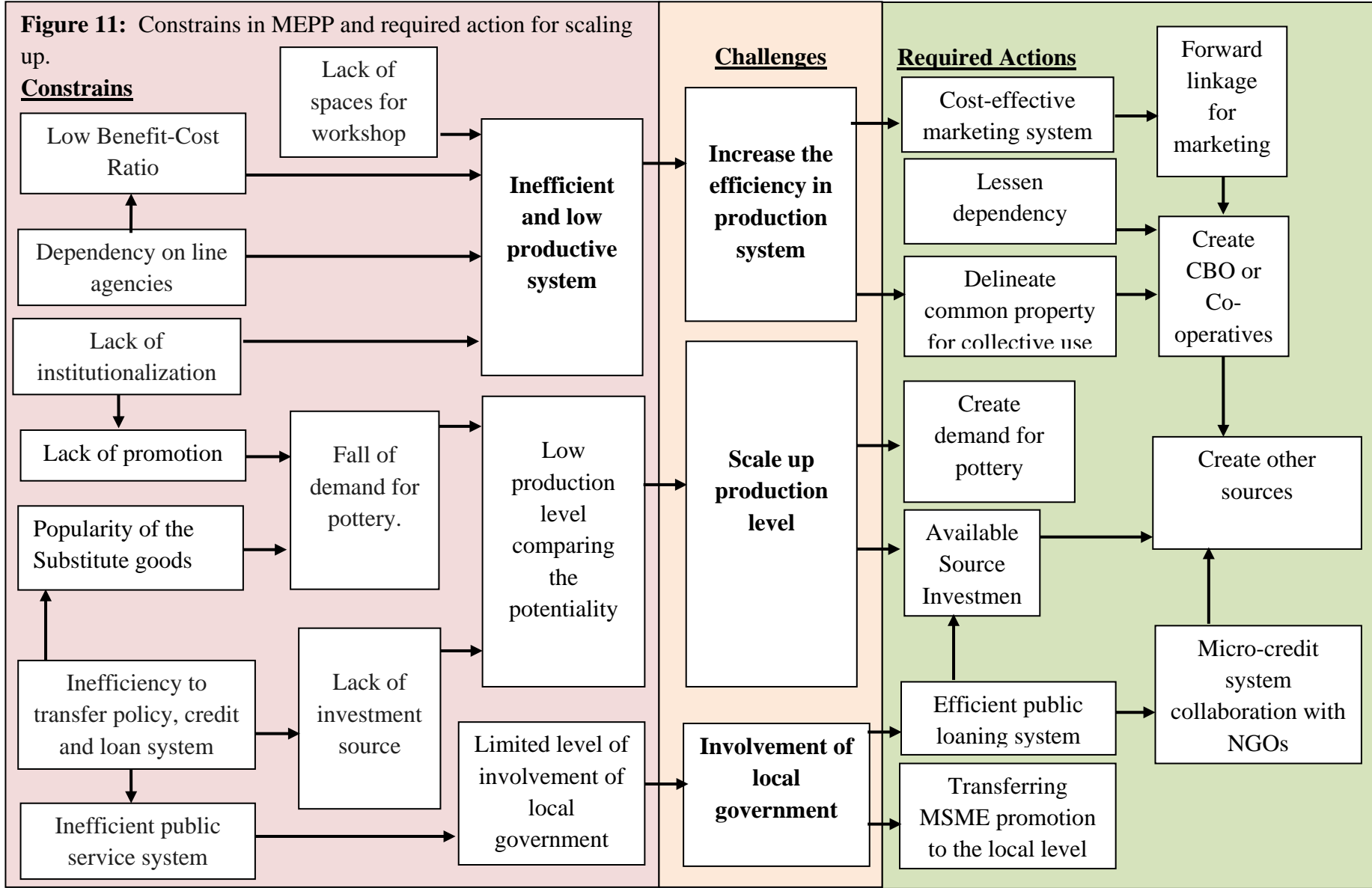
#### 6.4.2. Recommendation for MEPP

Principal difference within MEPP and TCPU has been the inefficiency in production level. The inefficiency primarily because of the lack of spaces for workshop, low Benefit-Cost Ratio, dependency on line agencies, lack of institutionalization. The other two challenges have been almost the same as TCPU. Thus the principal challenge regarding scaling up the production of TCPU has been:

1. Increase the efficiency in production system
2. Scaling up the production level
3. Involvement of the local government and the other development authorities

**Increase the efficiency in production system:** Considering the production system of MEPP, the efficiency mostly resides on low BCR. To rectify the problem the central strategy should be reducing the profit share with wholesaler or broker and lessen the dependency on them. In doing so, the best option for the local community has been to form CBO or Co-operative which can manage the marketing activities for them. Collective management can also help them to scale up the supply and delivery level.

To ensure *scaling up the production level* and *Involvement of the local government and the other development authorities* follows almost the same actions that have been mentioned earlier.



## **6.5. Conclusion**

Thus both TCPU and MEPP have constrains and potentialities to scale up to next stages production. Constrains can be minimized by taken action focusing the major problems regarding the production and marketing. Public authority and government have a big role to play here. Needless say, if guided properly, with the existing strengths and opportunities and lessen weakness and threats by taking actions, pottery certainly have scaling up potentialities and help the community to develop sustainable livelihood option in the locality.

## CHAPTER SEVEN: CONCLUDING REMARK

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As noted earlier, with the better institutionalization, linkage and capital supply both of the production unit in pottery have the potential to scaling up their production and marketing capacity. The constraints that the units have for scaling up have included both internal weakness and the external threats. Internal weaknesses can be managed by the community with proper facilitation. But the external threats should be removed by the governments with the help of policy, strategy and their proper implementation. Like the other MSMEs, pottery industry have been also neglected on the grounds of inefficiency and non-optimal use of productive factors compared to larger industries but it is beginning to be obvious that SMEs with their labor-intensive production techniques, lower requirements of imported inputs and better geographical dispersion serve a developing economy like Bangladesh in very efficient way. MSMEs can absorb an infinite number of investors with relatively small investment to generate the maximum per unit production and employment, and thus hold the key to the future of the economy.

Regardless the Potentiality pottery had this industry is not recognized by the policy level as a productive and potential sector yet. It is the duty of the all the stakeholder the potters, the laborer, the governing authorities, the banking authorities together with a better plan and careful execution of it can provide maximum result from the pottery production.

Scaling up of pottery production units in general terms need better loaning and investment system with backward and forward linkage to secure the flow of quality raw material and reach up to broader markets. And it had the potential to provide sustainable livelihood options to the potter community.

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## Appendix 01: Questionnaire Guide

### Questionnaire Guide On

**“Constrains and Potentiality of Scaling up Pottery Production Units in Bangladesh: A Comparative Case Study of Micro Enterprises of Dhaka and Cottage Industries in Tangail”**

The questioner guide is for collecting the information to satisfy the research, *“Constrains and Potentiality of Scaling up Pottery Production Units in Bangladesh: A Comparative Case Study of Micro Enterprises of Dhaka and Cottage Industries in Tangail”* conducted by Syed Afsan Shabab under his M. Phil on Development Studies program at Norwegian University of Science and Technology (NTNU). The collected information will only be used for academic research purpose.

**Questioner ID:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Location:** \_\_\_\_\_

**Name of Interviewer:** \_\_\_\_\_

**Section 01:** General Information

**1.1** Name of Respondent: \_\_\_\_\_

**1.2** # of family member: \_\_\_\_\_

**1.3** # of member Engaged in Pottery: \_\_\_\_\_

**1.4** Name and description of the members

Sl no.	Name of member	Male/Female M/F	Age	Education	Occupation	Involved in Pottery	
						Full time	Part- time
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1							
2							
3							
4							
5							
6							

**1.5** Total income of the HHs: .....

**1.6** # Employed person: \_\_\_\_\_

**1.7** Expenditure pattern of the HH

Area of expenditure		Amount Used (Kg/week)	Cost per unit Tk/kg	Total Spending (Tk/week)	Comments
<b>Food</b>	Rice				
	Protein				
	Vegetables				
	Others				
	<b>Sub-total</b>				
<b>Transportation</b>		NA			
<b>Education</b>		NA			
<b>Accommodation</b>		NA			
<b>Health</b>		NA			
<b>Entertainment</b>		NA			
<b>Fuel (Specify)</b>					

<b>Others (Specify)</b>				
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**Section 02: Asset Information**

**2.1 Detailed information of Person engaged in pottery.**

<b>Ref. No.</b>	<b>Working sector</b>	<b>Type of work</b>	<b>Average Income (Per unit of time)</b>	<b>Type of production unit</b>	<b>Goods produced</b>	<b>Comments</b>
<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>	<b>(e)</b>	<b>(f)</b>	

**Ref. no. 2.1 (a)** = sl. No. of table 1.4; **Code for 2.1(b)**: Production = P, Marketing = M, Middle-man = MD, Seller = S, Others = O; **Code for 2.1(c)**: Self-employed = 1, Salaried = 2, Others = 3 (Specify); **Code for 2.1(e)**: Single production unit = 1, Comparatively bigger unit = 2.

**2.2 Natural Capital**

What are the raw materials used for the pottery production?

Detailed information about the Raw materials:

<b>Sl. No.</b>	<b>Name of the element</b>	<b>Source</b>	<b>Proximity to the source. (in km.)</b>	<b>Cost related to collecting the raw material. (Tk./unit)</b>	<b>Engaged workforce</b>	<b>Comments</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>	<b>(e)</b>	<b>(f)</b>
1						
2						
3						
4						
5						
6						

**Code for 2.2(e)**: Male = M, Female = F, Children = C;

**2.3 Supply Chain of the Pottery Production**

**2.4 Financial Management for Production**

What is the cost of production (considering the production unit?)

How do you manage the investment cost? What are the terms and conditions for having those financial supports?

Is there any benefit from the public/governmental sector?

Are there any economies of scale in the cost of production considering the type of production unit? What are the distributions of the economies of scale if existed?

**Section 03: Problems related to pottery production and marketing and the possible solution**

Production phase	Related Problems	How the problem can be managed
Investment		
Collection of Raw materials		
Production of goods		
Marketing of goods		
Others		

**Section 04: Miscellaneous**

**4.1** Is there any seasonal variation in the availability of raw materials? If so explain...

**4.2** Mention which type of employment is more preferable to the labor engaged in pottery? a. salaried b. self-employed.  
Give justification for your choice.....

## Appendix 02: Age and Sex Ratios in the Study Area

The Appendix shows the age and sex ratio of TCPU and MEPP.

**Table:** Age and sex ratio of TCPU pottery group in Pal Para Village

Age Group	Total	Male	Female	Sex ratio
	Frequency	Frequency	Frequency	
<b>00-15 Age Group</b>	23	12	11	1.09
<b>16-65 Age Group</b>	67	37	30	1.23
<b>65+ Age Group</b>	2	1	1	1
	92	51	41	1.19

Source: Field Survey

**Table:** Age and sex ratio of MEPP pottery group in Kaguzipar and Khamar Para

Age Group	Total	Male	Female	Sex ratio
	Frequency	Frequency	Frequency	
<b>00-15 Age Group</b>	18	9	9	1
<b>16 - 65 Age Group</b>	52	30	22	1.36
<b>65+ Age Group</b>	2	1	1	1
<b>Total</b>	<b>75</b>	<b>40</b>	<b>32</b>	<b>1.25</b>

Source: Field Survey

### Appendix 03: Different Occupational Group within TCPU and MEPP

Different Occupational group in the Study area:

**Table:** Different Occupational Group within TCPU

Productive population	Overall (In Percentage)		Engage in Pottery Production				Shifted Profession		Unemployed	
			Fulltime		Part-time					
	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total</b>	<b>67</b>	<b>100</b>	<b>31</b>	<b>52</b>	<b>7</b>	<b>12</b>	<b>15</b>	<b>25</b>	<b>14</b>	<b>21</b>
Male	37	60	15	42	1	3	15	42	6	16
Female	30	40	16	67	6	25	0	0	8	27

Source: Field survey, 2012

**Table:** Different Occupational Group within MEPP

Productive population	Overall		Engage in Pottery Production				Shifted Profession		Unemployed	
			Fulltime		Part-time					
	Number	%	Number	%	Number	%	Number	%	Number	%
<b>Total</b>	<b>52</b>	<b>100</b>	<b>26</b>	<b>50</b>	<b>7</b>	<b>13</b>	<b>15</b>	<b>29</b>	<b>4</b>	<b>8</b>
Male	30	58	13	43	2	7	15	50	0	0
Female	22	42	13	59	5	23	0	0	4	18

Source: Field survey, 2012

### Appendix 04: Different Occupational Group within TCPU and MEPP

The Table is showing the frequency and the different occupational category chosen by potters after shifting their profession in TCPU and MEPP.

**Table 3: Occupation category**

Skill Type	TCPU		MEPP		Total
	Male	Female	Male	Female	
<b>Total</b>	<b>15</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>30</b>
<b>Service Holder</b>	3	0	2	0	5
<b>Tailor</b>	5	0	3	0	8
<b>Goldsmith</b>	2	0	4	0	6
<b>Bakery and sweets</b>	4	0	--	0	4
<b>Mechanic</b>	1	0	4	0	5
<b>Others</b>	--	0	2	0	2

Source: Field Survey, 2012

Table of Shifting of Profession from Pottery to Others by Age Group

Age Group	TCPU	MEPP	Total
<b>16 to 25</b>	8	10	18
<b>26 to 35</b>	7	5	12
<b>36 to 65</b>	0	0	0
<b>Total</b>	<b>15</b>	<b>15</b>	<b>30</b>

Source: Field Survey, 2012



## Appendix 05: Academic Status within TCPU and MEPP Community

Table Showing the Educational Status in TCPU and MEPP by Age Group.

Schooling year	TCPU						MEPP					
	Male	%	Female	%	Total	%	Male	%	Female	%	Total	%
<b>Illiterate</b>	6	7%	14	17%	20	24%	4	6%	11	16%	15	22%
<b>1 to 5 year</b>	21	25%	14	17%	35	42%	13	19%	5	7%	18	26%
<b>6 to 12 year</b>	21	25%	7	8%	28	33%	23	33%	12	17%	35	51%
<b>12+ year</b>	1	1%	0	0%	1	1%	1	1%	0	0%	1	1%
<b>Total</b>	<b>49</b>	<b>58%</b>	<b>35</b>	<b>42%</b>	<b>84</b>	<b>100%</b>	<b>41</b>	<b>59%</b>	<b>28</b>	<b>41%</b>	<b>69</b>	<b>100%</b>

## Appendix 06: Income expenditure information in MEPP and TCPU

Income expenditure information in MEPP and TCPU collected from the field.

TCPU Income and Expenditure				
House Hold Number	Size	total expenditure	Total Income	Income from Pottery
HH1	4	11030	11333	2833
HH2	3	3750	1298	1298
HH3	3	6735	9000	2000
HH4	4	4870	5000	1000
HH5	4	5185	2167	2167
HH6	7	10160	5833	5833
HH7	4	6250	3333	3333
HH8	5	4725	3417	3417
HH9	3	2400	5000	5000
HH10	5	8465	8375	2375
HH11	7	9130	13250	3250
HH12	3	4940	9817	4817
HH13	4	5840	12000	7000
HH14	5	7800	17625	5625
HH15	7	5160	10792	792
HH16	7	7150	13500	1500
HH17	6	4640	15500	1500
HH18	5	4440	8483	3483
HH19	6	6145	6500	500
<b>Total</b>	<b>92</b>	<b>118815</b>	<b>162223</b>	<b>57723</b>

Source: Field visit, 2012

Note: Amount is in BDT (1 USD = 81.84003 BDT on July 2012)

MEPP Income and Expenditure				
House Hold Number	Size	total expenditure	Total Income	Income from Pottery
HH1	4	9166	12500	12500
HH2	3	9820	9000	9000
HH3	5	16445	15300	15300
HH4	7	12300	15100	8100
HH5	5	12000	12000	12000
HH6	8	16200	15650	6650
HH7	5	12550	18667	6667
HH8	6	12650	15750	15750
HH9	3	10000	14200	14200

<b>HH10</b>	4	9050	7267	7267
<b>HH11</b>	6	12150	14000	7000
<b>HH12</b>	4	7650	7100	7100
<b>HH13</b>	5	8120	7833	7833
<b>HH14</b>	4	9770	15875	10875
<b>HH15</b>	6	10200	10000	5000
<b>Total</b>	<b>75</b>	<b>168071</b>	<b>190242</b>	<b>145242</b>

**Source: Field visit, 2012**

**Note: Amount is in BDT (1 USD = 81.84003 BDT on July 2012)**

## Appendix 07: Key Informant References in different study area

Key Informant References in different study area.

Study area	Name	HH reference no.	Production unit.	Nature of engagement
Kaguzipara, Dhamrai	Sri Ratan Chandra Pal.	01	MEPP	Owner
	Dholupar Pal	02	MEPP	Worker
Khamar Para, Savar	Laksman Pal	06	MEPP	Owner
	Kollani Rani	10	MEPP	Worker
Pal Para, Mirzapor	Jogesh Pal	8	TCPU	Owner
	Jomuna Rai	17	TCPU	Worker