UNIVERSITY GRANTS COMMISSION

BAHADUR SHAH ZAFAR MARG

NEW DELHI-110002

MAJOR RESEARCH PROJECT

REFERENCE NO: F.NO 5-90/2014(HRP)

DATED: 5.9.2015

TITLE:

ENTREPRENEURSHIP DEVELOPMENT AND FORMATION OF INDUSTRIAL CLUSTERS- CASE STUDY IN SELECTED URBAN AND RURAL REGIONS IN SOUTHERN PART OF WEST BENGAL

FINAL REPORT

PRINCIPAL INVESTIGATOR

SOUMYENDRA KISHORE DATTA

PROFESSOR
DEPARTMENT OF ECONOMICS
THE UNIVERSITY OF BURDWAN
BURDWAN-713104
WEST BENGAL
2018

Final Report of the work done on the Major Research Project

1.	**Project Report No**	:	Final
2.	**UGC Reference No**	:	F. No 5-90/2014(HRP)
3.	**Period of Report from**	:	1.7.2015 – 30.6.2018
4.	**Title of Research Project**	:	Entrepreneurship Development and Formation of Industrial Clusters- Case Study in Selected Urban and Rural Regions in Southern Part of West Bengal
5.	**Name of Principal Investigator**	:	Soumyendra Kishore Datta
6.	**Dept. and University where work has progressed**	:	Department of Economics The University of Burdwan
7.	**Effective date of staring of the project**	:	1.7.2015
8.	**Grant approved and expenditure incurred during the period of the project**		
(a)	**Total amount approved**	:	923200 /-
(b)	**Total expenditure**	:	880936/-
(c)	**Report of the work done**	:	Report Attached

(a)   Brief Objective of the project

Broad objective

Overall goals are to assess the socio- economic dynamics of emergence and formation of clusters, motivational perspective of individual entrepreneurs, issue of social/relational capital that sustain the efficiency and competitive spirit in clusters and nexus between environmental perceptions and associated strategic policies undertaken by individual firms in a cluster.

Specific Objectives

The problems to be investigated are-

1. To analyze the formation pattern of the clusters in the respective sample geographical sites.

2. To examine the entrepreneurial disposition of individual units in cluster on the basis of some of the well defined and empirically verified concept of motive.

3. To identify the weaker and relatively stronger motives of entrepreneurship in the different clusters and compare them.

4. To assess the variation in   relational capital across different clusters and relate it to the level of firm performance captured by suitable indicator.

5. To identify the changes in entrepreneurial environment   perceived to be having an impact on the respective clusters and to identify the strategic responses preferred by the units in the corresponding clusters and to assess the degree of their inter-relation.

(b)   Work done so far and result achieved and publications, if any from the work.

- "Analysis of Motivation Issues and Link with Profitability: Case Study of Entrepreneurial Firms in a Rural Cluster in West Bengal, India", *Journal of Business and Economics, 2016* (With: D. Ghosh)

- "Relational Capital and Firms Performance: An Analysis in the Context of Clustered Firms in a Rural Region in West Bengal, India", In Soumyendra Kishore Datta, Arup Kumar Chattopadhyay & Soumyananda Dinda (eds) Inclusive and Sustainable Development. Serial Publication, New Delhi, 2018 (With D. Ghosh)

- "Role of Relational Capital and Firm Performance: Analysis of a Cluster of Bell-metal Enterprises in a Rural Region in West Bengal, India" *Journal of Entrepreneurship & Organization Management, 2017* (with T. De)

- "Analysis of Entrepreneurial Motivation in a Brass-Ware Cluster in a Semi-Urban Region, West Bengal India", (With: T. De) This Paper has been accepted for publication in the *Journal of Entrepreneurship & Management, New Delhi. Proof checking completed.*

- "Analysis of Business Environmental Aspects and Entrepreneurial Strategy – Case Study of a Cluster of Bell Metal Enterprises in West Bengal, India" (With D. Ghosh & T. De) This Paper has been submitted for publication in the *Journal of Entrepreneurship & Management, New Delhi*

(c)   Has the progress been according to original plan of work and towards achieving the objective, if not state reasons

Yes the progress has been according to original plan of work and had been towards achieving almost all the objectives of the project excepting in one case where a segment of stakeholders' responses were to some extent involuntarily revealed at the time of interview.

(d)   Please indicate the difficulties if any, experienced in implementing the project

The enterprise owners and local people helped in all the clusters to gather the required data, However in one case only some of the stakeholders were reticent about revealing the true profit related figures which prevented us from undertaking a meaningful analysis.

(e)   If the project has not been completed please enclose the approximate time by which it is likely to be completed

The project has been completed and hence further extension of time is not needed

(f)   If the project has been completed please enclose a summary of the findings of the study. Two bound copies of the final report of work done may also be sent to the commission.

Final report completed and hereby attached

Summary enclosed

(g) **Any other information which would help in evaluation of the work done at the completion of the project. The final repor should indicate the output, such as (a) manpower trained (b) Ph.D Awarded (c) Publication of results (d) other impact if any.**

Project fellow and the hired students have been extensively trained in field work, data analysis and computer work. Discussion with stakeholders and associated management group in some cases increased mutual sharing of knowledge and information.

One student on hired labour basis has been enthused by the study related to the project and registered for Ph.D work on some aspect of entrepreneurship cluster. The title of his research topic is

"Aspects of Entrepreneurship Development in the Context of Industrial Cluster: Case Study in West Bengal"

Publications:

- "Analysis of Motivation Issues and Link with Profitability: Case Study of Entrepreneurial Firms in a Rural Cluster in West Bengal, India", *Journal of Business and Economics, 2016* (With: D. Ghosh)

- "Relational Capital and Firms Performance: An Analysis in the Context of Clustered Firms in a Rural Region in West Bengal, India", In Soumyendra Kishore Datta, Arup Kumar Chattopadhyay & Soumyananda Dinda (eds) Inclusive and Sustainable Development. Serial Publication, New Delhi, 2018 (With D. Ghosh)

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Soumyendra Kishore Datta

(Principal Investigator)

Soumyendra Kishore Datta
or
Department Economics
The University of Burdwan

Registrar

REGISTRAR (Officiating)
THE UNIVERSITY OF BURDWAN
BURDWAN-713104

Annexure IX

UNIVERSITY GRANTS COMMISSION
BAHADUR SHAH ZAFAR MARG
NEW DELHI-110002

1.	NAME AND ADDRESS OF PRINCIPAL INVESTIGATOR	:	SOUMYENDRA KISHORE DATTA PROFESSOR DEPARTMENT OF ECONOMICS THE UNIVERSITY OF BURDWAN GOLAPBAG BURDWAN-713104 WEST BENGAL
2.	NAME AND ADDRESS OF THE INSTITUTION	:	THE UNIVERSITY OF BURDWAN RAJBATI BURDWAN-713104 WEST BENGAL
3.	UGC APPROVAL AND NO. AND DATE	:	F.No5-90/2014(HRP)
4.	DATE OF IMPLEMENTATION	:	1.7.2015
5.	TENURE OF THE PROJECT	:	Three years(1.7.2015- 30.6.2018)
6.	TOTAL GRANT ALLOCATED	:	Rs. 923200/-
7.	TOTAL GRANT RELEASED	:	Rs 846240/-
8.	FINAL EXPENDITURE	:	Rs. 880936/-
9.	TITLE OF THE PROJECT	:	Entrepreneurship Development and Formation of Industrial Clusters- Case Study in Selected Urban and Rural Regions in Southern Part of West Bengal

10.   OBJECTIVES OF THE PROJECT

(a) Broad objective

Overall goals are to assess the socio- economic dynamics of emergence and formation of clusters, motivational perspective of individual entrepreneurs, issue of social/relational capital that sustain the efficiency and competitive spirit in clusters and nexus between environmental perceptions and associated strategic policies undertaken by individual firms in a cluster**.**

(b) Specific Objectives

The problems to be investigated are-

1. To analyze the formation pattern of the clusters in the respective sample geographical sites.
2. To examine the entrepreneurial disposition of individual units in cluster on the basis of some of the well defined and empirically verified concept of motive.
3. To   identify the weaker and relatively stronger motives of entrepreneurship in the different clusters and compare them.
4. To assess the variation in   relational capital across different clusters and relate it to the level of firm performance captured by suitable indicator.
5. To identify the changes in entrepreneurial environment   perceived to be having an impact on the respective clusters and to identify the strategic responses preferred by the units in the corresponding clusters and to assess the degree of their inter-relation.

11.   WHETHER OBJECTIVES WERE ACHIEVED

Yes, the objectives have been achieved

Cluster development has not been in the agenda of major activity of promotional agencies in the country. But despite that, there has been natural development and flourishing of small industrial clusters in several parts of the country during the last several decades.

In this context it seems imperative to study the process of formation and flourishing of clusters through evolving of entrepreneurship in some selected regions in West Bengal, based on the interaction of motivational factors, relational capital and environmental parameters, which also influence the strategic and entrepreneurial resourcefulness for successful performance. Based on several components, motivation index and relational capital index have been derived for each cluster and their link with profitability analysed. The internal consistency of motivational and relational capital components have been tested by computing Cronbach alpha value.

On the basis of observing the importance attached to respective motivation items in the firms over the five clusters , it came out that some motivation components are assigned higher weightage in majority of the clusters. These have been identified as earning satisfaction from independent work, aspiration for doing independent work, enjoy greater flexibility in personal life, maintaining family legacy as well earning respectable income. Again , higher the level of relational capital and its associated spillover, better is likely the result in problem solving, planning and management quality of a firm, which over the long run can enhance competitive efficiency and reduce organizational cost.Factor analysis has been carried out to help isolate major variables that have a bearing on perceived environmental and strategic components. An organisation chooses a definite strategic course of business in coherence with the environmental aspects affecting the business. The canonical correlation analysis suggests that the set of major perceived environmental variables have a reasonably close linear association with the set of deemed strategic responses that are mostly considered fit in the relevant context.

12.   ACHIEVEMENTS FROM THE PROJECT

Field trip to different cluster of firms in both rural and urban areas, interaction with the enterprise owners and skilled labourers working at the time of visit and the sight of actual operation in the firms /workshops exposed the investigators to the kind of man-machine linkages as well as status of owners' supervision during working hours. The study also revealed the various problems in which the entrepreneurs have to continue their work. Problem of skilled labour, inadequate finance, Inadequacy of raw materials, problem of marketing facilities etc. often plague the continuity of intensity in work in the clusters. The firms are also constrained to meet the pollution

regulatory norms, during production process. Relevant policy prescriptions have been suggested in case of cluster specific scenarios.

Three papers have already been published, one paper has been accepted and one has been submitted to a journal.

One student working on hired labour basis, has been registered for Ph.D on a topic linked with the project work.

13.   SUMMARY OF THE FINDINGS (IN 500 WORDS)

Development policies in India have traditionally put focus on individual units in the SSI sector. Cluster development has not been in the agenda of major activity of promotional agencies in the country. But despite that, there has been natural development and flourishing of small industrial clusters in several parts of the country during the last several decades. This has made the policy makers realize the strategic benefit of such an institution. There has been a differential in the tempo of development of different clusters across various regions in India. In this context the study focuses on the issue of formation of cluster and development of entrepreneurship in some selected regions in West Bengal, based on the interaction of motivational factors, relational capital and environmental parameters, which also influence the strategic and entrepreneurial resourcefulness for successful performance.

 In case of highly populated developing countries, this motivation factor assumes great significance. This is because in such countries like India there exists huge scale of unemployment and lack of opportunities for white collar jobs. Hence adopting business/setting up industrial production units happen to be a major avenue for earning for a big chuck of unemployed population.

On the basis of observing the importance attached to respective motivation items in the firms over the five clusters, it came out that some motivation components are assigned higher weightage in majority of the clusters. These have been identified as earning satisfaction from independent work, aspiration for doing independent work, enjoy greater flexibility in personal life, maintaining family legacy as well earning respectable income.

Again it cannot be gainsaid that for the flourishing of business, the firms need to maintain a cordial relation with all the stakeholders who may be directly or indirectly linked with its process of production and disposal of final output. Dealing with the stakeholders in an efficient way helps generate strong bond or relationship which usually proves very effective for the firm to improve the quality of its product, market its output and/or lower the prices in order to remain competitive in the market.

In general the performance of an enterprise is also governed by its competitive strength, urge and aptitude to adjust and cope with the external environment and internal factors.

Internal factors include actions taken by the enterprise related to its financial condition, owned material resources, relational capital, attitude towards business dealings, its development strategy and methods of management. Again each enterprise works under the influence of the environment beyond its control and tries to adjust its process of operation accordingly. The interactive nature of this relationship is manifested in the fact that the organisation sets relevant products in response to markets needs and undertakes production consistent with prevalent business environment condition.

The competitiveness of the enterprise is derived from its ability to use available resources in the process of acquiring the share of customers and maintaining the goodwill of the organization by fair business dealings with each stakeholder. In an era of increasing competition, while each enterprise must strive hard to maintain its share of customers and amiable market transactions, it also should try to adjust with rising business uncertainty and unrest in the environment by constantly adjusting its tactics and strategies and the organization must constantly adapt and improve its products.

14. CONTRIBUTIONS TO SOCIETY

The study unravels the important components of entrepreneurial motivation, and relational capital that may have substantial impact on the performance of the enterprises. Promotion of entrepreneurship is an important aspect for driving economic growth and reducing unemployment and for this purpose understanding the motivational components of entrepreneurs in different clusters is very important.

Further the flourishing of an enterprise is also governed by how it maintains relation with the stakeholders associated with it. Workshops for motivating young entrepreneurs and guide them how to create an ambient relational capital base would serve development of cluster specific entrepreneurship. Again apart from the internal environment, external business environment also shape the competitive strength and urge to choose appropriate strategies. The Govt. should create a business friendly environment by declaring lucrative policies for arresting the mindset of people towards adopting entrepreneurship as a means of their livelihood. This would further generate employment and partly alleviate the unemployment burden in an overpopulated country.

| 15. | **WHETHER ANY PH.D ENROLLED/PRODUCED OUT OF THE PROJECT** | • ONE STUDENT ON HIRED LABOUR BASIS HAS BEEN REGISTERED FOR PH.D ON A TOPIC RELATED TO THE PROJECT |
| 16. | **NO. OF PUBLICATIONS OUT OF THE PROJECT** | • THREE PAPERS HAVE BEEN PUBLISHED
• ONE HAS BEEN ACCEPTED
• ONE MORE COMMUNICATED. |

Soumyendra Kishore Datta

Soumyendra Kishore Datta

(Principal Investigator)

Registrar

Contents

List of Table

ACKNOWLEDGEMENT

in doing survey work, compiling huge data and doing computer work whenever required. Finally I must gratefully acknowledge the cooperation and positive attitude of entrepreneurs (in rural and urban areas) who patiently managed time to listen to our queries from their busy schedule and spent time in answering the questions while undertaking the survey.

Soumyendra Kishore Datta,
Principal Investigator

Entrepreneurship Development and Formation Of Industrial Clusters-Case Study in Selected Urban and Rural Regions in Southern Part of West Bengal

SUMMARY

The small industries have in many cases, proved to be more efficient and productive than their counterparts in big industries. This is largely because of the spirit of flexible specialisation that was ventilated in the clustering model in which several units producing different parts /sub assemblies of the same or related product co-ordinated or complemented their actions. In fact the model of small industrial development has shown the way to high road/low road economic prosperity in cases where many large units had to be closed down in the event of uncertainty in a globalised regime. However development policies in India have traditionally put focus on individual units in the SSI sector. Cluster development has not been in the agenda of major activity of promotional agencies in the country. But despite that, there has been natural development and flourishing of small industrial clusters in several parts of the country during the last several decades. This has made the policy makers realize the strategic benefit of such an institution. There has been a differential in the tempo of development of different clusters across various regions in India. In this context the study focuses on the formation and flourishing of clusters through entrepreneurial efforts in some selected regions in West Bengal, based on the interaction of motivational factors, relational capital and environmental parameters, which also influence the strategic and entrepreneurial resourcefulness for successful performance. The study is based on analysis of aforesaid issues in case of fish hook cluster in Borjora in Bankura, Bell metal cluster in Dharmoda, Nadia, Brassware cluster in Nabadwip in Nadia, Foundry Cluster in Howrah and Hosiery Cluster in Shovabazar, Kolkata.

In the context of highly populated developing countries, the motivation factor assumes great significance. This is because in such countries like India there exists huge scale of unemployment and lack of opportunities for white collar jobs. Hence adopting business/setting up industrial production units happen to be a major avenue for earning for a big chunk of unemployed population. But often there does not exist

the appropriate mindset among the youth for taking to these entrepreneurial activities. Hence the analysis and assessment of the motivation factors that drive at least some part of the population to these enterprising occupations, seems extremely imperative for replication and extension to the society at large. And this assumes special importance specially in case of clustered small and medium scale firms. In this context focus has been put on a comparative analysis of the ranking of various items of motivation as perceived by the respondents in an industrial cluster, analyse the reliability of various items of motivation for assessing their consistency and develop an index of motivation on the basis of principal component technique and find the level of association between motivation index and firm performance level.

On the basis of observing the importance attached to respective motivation items in the firms over the clusters, it came out that some motivation components are assigned higher weightage in majority of the clusters. These have been identified as earning satisfaction from independent work, aspiration for doing independent work, enjoy greater flexibility in personal life, maintaining family legacy as well earning respectable income.

Again it cannot be gainsaid that for the flourishing of business, the firms need to maintain a cordial relation with all the stakeholders who may be directly or indirectly linked with its process of production and disposal of final output. Dealing with the stakeholders in an efficient way helps generate strong bond or relationship which usually proves very effective for the firm to improve the quality of its product, market its output and/or lower the prices in order to remain competitive in the market. Thus the aspects of sharing of technological knowledge, maintaining cordial relation with customers as well as input suppliers, informal relation with firms in cluster, linkage with external bodies, reputation in market and trust are considered to be important factors of relational capital.

The reliability of the instrument used for measuring relational capital indicators is provided by the Cronbach alpha coefficient which reflects the level of internal consistency of the indicators.

In case of fish hook cluster it is observed that there is undercurrent of mutual rivalry and competition across the firms. The lurking desire across the firms to capture a

bigger size of the total market and undercut their co-producers in the locality seem to be reflected in a non-cohesive (with other indicators of relational capital) impact on the informal relation of firms in the locality. Further this type of attitude among the entrepreneurs reinforces sort of poor trust and flexible bonding, stronger version of which are often required to generate a relational capital atmosphere conducive to sustained and vibrant growth in the region.

In case of bell metal cluster in Dharmoda, almost all the firms produce articles of the same type/ use same type of technology. There is neither attached great importance nor it is perceived necessary for sharing of knowledge. However evenness of knowledge leads to competitive spirit and better quality that is reflected in significantly better profitability performance. Again the bell metal firms in this region have a long tradition of enterprise based production. The supply of their output in the market through the chain link of mahajans, clustering of a number of skilled enterprise owners in a small neighbourhood and their earlier link with Moradabad group of firms and inclination to excel their production quality have helped spread their reputation. There has therefore been a favourable perception about the informal relation across the firms in the cluster. Because of geographical proximity to metropolitan market at Calcutta, the locational advantage of the cluster is also considerable.

The firms in the cluster in Nabadwip region, have expressed mutually cordial and good faith relation with other firms within a particular geographical locality. They are also interested to maintain good relation with the stakeholders in the market. Sharing of technological knowledge, linkage with external market and informal relations within a cluster are given only moderate importance in the perception of the firms.

As the firms in foundry cluster are located in urban setting and the customers and input suppliers are relatively better educated and knowledgeable persons, hence maintaining goodwill and reputation of the business is given premium importance in the ranking of the enterprise owners. Further they value mutual trust and faith reposed in everyday transactions where huge amount of money is involved. This mutual trust and faith is considered as one important aspect of business dealings. Mutually shared technical knowledge, link with external market bodies as well as

informal relation maintained across them and their locational advantage are items which are somewhat relegated in their perception.

Hosiery cluster based firms are found to put more importance on maintaining relation with customers and input suppliers, mutually affable and warm relationship with firms in the cluster based on trust and faith. The enterprise owners often remain concerned about how to avoid low trust and faith from fellow producers. Poor working environment, very low wage rate mainly in stitching sector, absence of in-house production facility, non-availability of technical institution for upgradation of product, presence of child labour etc. often interfere with relational capital items and cause no significant impact of these on profitability aspect of the enterprises.

In general maintaining customer repeat rates, stable prices along with good product quality as well as uninterrupted supply of output are some of the factors that contribute to the fostering of good relation with customers. It is suggested from the analysis that identifying areas of relational capital which, if managed and nurtured efficiently and deftly, can make substantial contribution to the performance of firms.

The performance of an enterprise is also governed by its competitive strength, urge and aptitude to adjust and cope with the external environment and internal factors.

Internal factors include actions taken by the enterprise related to its financial condition, owned material resources, relational capital, attitude towards business dealings, its development strategy and methods of management. Again each enterprise works under the influence of the environment beyond its control and tries to adjust its process of operation accordingly. The interactive nature of this relationship is manifested in the fact that the organisation sets relevant products in response to markets needs and undertakes production consistent with prevalent business environment condition.

The competitiveness of the enterprise is derived from its ability to use available resources in the process of acquiring the share of customers and maintaining the goodwill of the organization by fair business dealings with each stakeholder. In an era of increasing competition, while each enterprise must strive hard to maintain its share of customers and amiable market transactions, it also should try to adjust with

rising business uncertainty and unrest in the environment by constantly adjusting its tactics and strategies and the organization must constantly adapt and improve its products.

In order to inculcate the motivation and spirits to choose entrepreneurship as a career option, some preliminary steps need to be introduced. It is important to ensure that the individual be nurtured at an early stage through creation of awareness programmes of self employment and by incorporation of vocational subjects in educational system starting from primary education only. The success stories of eminent entrepreneurs/ industrialists need to be introduced in syllabus in a very attractive manner. Special initiatives need to be undertaken by arranging periodic meetings/interactive sessions of students at secondary/HS level with entrepreneurs for creating awareness and interest and motivating them for choosing this career.

Separate programme is required to generate awareness and interest among the people in general and providing guidelines to the interested individuals for setting up the new business units in particular. There should be adequate infrastructure and advertisement for attracting people to adopt these facilities.

Despite govt. efforts to streamline various reforms for enticing potential entrepreneurs to start their ventures, there still remain a number of formalities required to be completed by the entrepreneur before processing their loan applications. These formalities need a relook, and should be designed in such a manner that the entrepreneurs may undergo hassle-free stages before the bank can process it at a minimum time after the project has been settled and is brought to operational stage. The loan procedure should be streamlined so that the initiative of the potential entrepreneur be not debarred at the outset for fear of harassment and complex loan sanction processes before undertaking the endeavour to start his enterprise. .

The development needs of backward regions can be effectively served by initiating suitable programmes, entrepreneurship training and awareness campaigns by bringing the rural youth under its fold. The special aptitudes, inclinations and potential of these rural people should be identified and accordingly region specific programmes should be launched in coherence with the technical expertise,

managerial competence and available local resources. This is likely to contribute to regional rural development potential and satisfy social needs.

Chapter One

Introduction

1.1   Introductory View

The phenomenal growth of small enterprises that have followed since the enunciation of 1948 and 1956 industrial policy has assumed greater relevance now in the context of stress on decentralised development in the country. In many cases the small industries have proved to be more efficient and productive than their counterparts in big industries. This is largely because of the spirit of flexible specialisation that was ventilated in the clustering model in which several units producing different parts /sub assemblies of the same or related product co-ordinated or complemented their actions. In fact the model of small industrial development has shown the way to high road/low road economic prosperity in cases where many large units had to be closed down in the event of uncertainty in a globalised regime. However development policies in India have traditionally put focus on individual units in the SSI sector. Cluster development has not been in the agenda of major activity of promotional agencies in the country. But despite that, there has been natural development and flourishing of small industrial clusters in several parts of the country during the last several decades. This has made the policy makers realize the strategic benefit of such an institution. There has been a differential in the tempo of development of different clusters across various regions in India. In this context it seems imperative to study the process of formation and flourishing of clusters through evolving of entrepreneurship in some selected regions in West Bengal, based on the interaction of bmotivational factors, relational capital and environmental parameters, which also influence the strategic and entrepreneurial resourcefulness for successful performance.

In West Bengal, the industrialization drive has long been in a subdued scale. In recent times however, the complementary role has to some extent been taken up by the upcoming small sector developing in clusters. Despite the generally lacking

spirit of entrepreneurship, there have emerged a number of clusters specializing in different products in different areas of the state. What is interesting is that a number of them have developed in relatively backward districts despite weak infrastructure. In this context the study of industrial clusters has assumed great relevance in the perspective of understanding the motivational role of entrepreneurship and socio-economic environment in its emergence and replication of possible success factors. The study seeks to unravel the process of emergence of entrepreneurship and its variation in the context of evolving of small scale industrial clusters in different geographical regions.

The study would provide insight about the cluster formation process and genesis of an entrepreneurial culture. It will also shed light on the process of moulding of the motivational perspective of individual entrepreneur. It would be helpful to local Govts interested in implementing cluster development policy and thus promoting an environment congenial for the flourishing of entrepreneurship.

1.2   Broad Objective

Overall goals are to assess the socio- economic dynamics of emergence and formation of clusters, motivational perspective of individual entrepreneurs, issue of social/relational capital that sustain the efficiency and competitive spirit in clusters and nexus between environmental perceptions and associated strategic policies undertaken by individual firms in a cluster.

1.2.1 Specific Objectives

The problems to be investigated are-

1. To analyze the formation pattern of the clusters in the respective sample geographical sites.

2. To examine the entrepreneurial disposition of individual units in cluster on the basis of some of the well defined and empirically verified concept of motive.

3. To identify the weaker and relatively stronger motives of entrepreneurship in the different clusters and compare them.

4. To assess the variation in relational capital across different clusters and relate it to the level of firm performance captured by suitable indicator.

5. To identify the changes in entrepreneurial environment perceived to be having an impact on the respective clusters and to identify the strategic responses preferred by the units in the corresponding clusters and to assess the degree of their inter-relation.

1.3   Scheme of the Study

In order to put analytical focus on the objectives of the study, the project report is presented in terms of the following chapters

1) Introduction of the theme of study (as already stated)
2) Review of Literature
3) Data and methodology
4) Formation Pattern of Different Clusters and Description of Study Region
5) Analysis of Motivation Issues of Entrepreneurs
6) Focus on Relational Capital and Firm Performance
7) Analysis of Business Environmental Aspects and Entrepreneurial Strategy
8) Concluding Observations and Policy Prescriptions

1.4   Sampling Design

In order to study the issues pertaining to emergence of the different cluster of firms and the entrepreneurial motivation, relational capital, perceived entrepreneurial environment and strategic selection, a number of clusters producing different items in both rural and urban regions are selected. The sampling design of the study is shown below.

Table 1.1: Sampling Design of the Study Area

Region	Location	Type of Production	Sample size	Type of sampling
Rural	Barjora (Bankura district)	Fishing Hook	16	Purposive
	Dharmoda (Nadia District)	Brass/Bell metal utensil	60	purposive
	Nabadwip (Nadia district)	Brass ware articles	60	purposive
Urban	Bally (Howrah district)	Foundry	30	purposive
	Shovabazar (Kolkata)	Hosiery products	30	purposive

Chapter Two
Review of Literature

2.1 International status

Entrepreneurship appears to be an important element in the formation and clustering of innovative technology based firms and promoting regional development. However according to Appold (2000) the role of individual change agents in shaping a regional development process has been largely ignored in development models. Again often, the socio-economic institutions associated with entrepreneurial development, are largely treated as exogenous rather than evolutionary and adaptive as indicated by Nelson and Winter (1982).

Schumpeter (1939), Kirzner (1973) view that entrepreneurs have great ability to perceive opportunity and accept challenges and can collectively shape their local environments through building institutions. Entrepreneurs are assumed to be key and active agents in the emergence and growth of technology dependent clusters.

Leslie and Kargon (1994) wonder about the differences in locational evolution of clusters based on innovative entrepreneurship. According to Feldman et al (2001), location of clusters is determined by emergence of similarly motivated entrepreneurial class interested in capitalizing on emergent technological and market opportunities with utilization of their skills and a congenial entrepreneurial environment.

According to Maskell and Malmberg (1999) technology clusters may be conceived as organically related and mutually dependent firms and institutions. The operational role of the entrepreneur in stimulating his local environment to further innovation and responsiveness to challenges and risks is emphasized.

The notion that similar industries cluster together is hardly new, having been described in the general economic literature at least as far back as Marshall's

Principles (Mulligan 1984). Following Marshall, industries cluster for three basic reasons, all related to minimizing costs. The reasons are clubbed as ensuring reduced transportation costs, reduced labor costs and reduced capital cost involved in the advantage of "knowledge spillovers" from nearby establishments.

With regard to clustering phenomenon, Romer (1986, 1990), sought insight in the earlier works by Marshall (1920) and Arrow (1962), and stated that MAR externalities (Marshall-Arrow-Romer) positively influence firms' growth as knowledge spillover from one firm leads to evolving of technology in other firms. Industries that are regionally specialised would benefit from the within-cluster transmission of knowledge and therefore should grow faster on the basis of united and coordinated action.

According to Baptist (1996), geographical clustering is induced by a particular type of agglomeration externalities i.e the knowledge spillovers. These spillovers, usually an upshot of inter-firm coordination or collaboration have benefits that extend beyond technological innovation and productivity. It has extensive impact even in the form of altering the financing, marketing, managerial and organisational practices of the beneficiaries. Knowledge spillovers emerge from regular interaction, networking through geographical proximity, or even through formal arrangements such as joint-ventures and joint research work.

Becattini (1990) extends Marshall's idea from purely economic effects of agglomeration to a broader dimension, which also strongly puts stress on the role of the social, cultural, and institutional foundations of local industrial growth. Becattini (1990) defines an industrial districts as a socio-territorial entity which is characterised by the active presence of both a community of people and a population of firms in one naturally and historically bounded area.

The question of whether or not clusters are an appropriate focus of economic development strategies for rural areas depends on the relationship between clusters and local economic growth. Bernat (1999) in his paper discusses some of the issues involved in measuring the relationship between clusters and rural economic growth.

Anderson and Teubal (1999) in their work put stress on several factors like strong industry networks, supportive local culture, ability to reconfigure resources etc

associated with cluster development and stability. Bringing in the context of US Capitol region rich in clustering biotechnology and ICT firms, they argue that a mature cluster offers diverse job opportunities for an employee without changing residence.

Saxenian (1994) puts focus on the ability of mature clusters to withstand sudden shocks like economic downswings. He also analyses US SILICON valley from the viewpoint of its adaptation to restructuring and clustering of semiconductor and computer industry with an explanation of the importance of social capital facilitating the region to evolve, adapt to shocks and accommodate newer challenges.

Positive loop of external economies often play a key role in clusters (Baptista and Swann, 1999; Beaudry *et al.*, 1998; Swann *et al.*, 1998;). Agglomeration or external economies give rise to better demand and supply conditions within a cluster than in isolation. This again promotes the growth of incumbent firms and allures the entry of new firms. This growth and entry increases the intensity of agglomeration and so promotes further growth and entry which begins to accelerate once a cluster has reached a critical mass (Pandit *et al.*, 2001a)

Anxious to halt the economic decline, the British government, in its 1998 White Paper on competitiveness, stressed the importance of new innovative entrepreneurship rather than entrepreneurial acumen and foresight of existing business class. This stress on growth of new single business firm ignores the potential of a policy of diversification by existing entrepreneurs starting additional firms. In this context Rosa et al (1999) considered diversification as an entrepreneurial phenomenon based on case studies of new high-growth Scottish companies. The study found that most of the business owners had set up more than one company, and many had successfully pursued entrepreneurial forms of diversification. Through their diversified network of business, the high-growth companies were, in effect, operating as embryonic business clusters, rather than single unidimensional businesses.

The second category of studies views cluster formation and development through governmental or institutional policies. These studies mainly concentrate on the relationship between policies and clusters (Rosenfeld 1997; Porter, 2000; Brown,

2000; Parrilli, 2004a; Ketels and Memedovic, 2008; Crone, 2009). The aspects that attract most attention in this approach include policy intervention or inducement, policymaking processes, and policy application in practice, all emphasising the role and impact of public policies in shaping the dynamics for cluster development (Parrilli, 2004a; Palazuelos, 2005; Whitehurst and Siedlok; 2006; Zeng, 2008).

Cluster policies have proliferated and increasingly been implemented throughout both developed and developing economies since the 1990s, for example: Europe (Humphrey and Schmitz, 1995; Raines, 2000), North America (Rosenfeld, 1995; Porter, 1998a, b), Asia (Segal and Thun, 2001; Tambunan and Supratikno, 2004) Africa (Parrilli, 2003; Morris and Barnes, 2007; Zeng, 2008), and other parts of the world. It is widely believed that government decisions have a major influence on the trajectories of cluster formation in various ways.

2.2   National Status

According to Vijaya and Kamalathan (1998), there is a need to treat entrepreneurial motivation as a separate entity and objectively measure and classify different types of motivation to draw meaningful inferences. Five core motivations- the entrepreneurial core motivation, the work core motivation, the social core motivation, individual core motivation and the economic core motivation are identified with factor analysis by the principal component method. The strength is measured using the likert–type five point rating scale. By developing a model, Misra and Kumar (2000) sought to help analyse various aspects that prompts an entrepreneur to make the best use of diverse opportunities and thereby regulate and direct his/her behaviour to make the best use of such opportunities. Sinha (1996) argues that early experiments in entrepreneurship development through training interventions were heavily supported by the assumption that personality factors such as achievement motivation played a crucial role in creating business endeavours. According to Balasubrahmonya (2003) the level of development of a region in terms of educational and technological infrastructure influences the internal and external factors contributing to technological innovation of enterprises. Priyadarshi in a comparative study of Chotonagpur and Meghalaya highlight the socioeconomic, cultural, societal as well as psychological differences of entrepreneurship which are governed by the environment in which they operate. Roy and Ramachandran (1996)

attempted to present a conceptual framework, underlying the interrelationships among various elements involved in entrepreneurship. According to Nath (2000), the states in which entrepreneurs are concentrated have noticeably higher level of economic and social development than those in which there is a noticeable absence of entrepreneurs. Manimala (2005) studied the nature of changes in business environment following economic liberalization and the strategic responses being adopted by Indian firms to cope with such changes.

According to a survey conducted by Shahzad Bahadur relating to SSI entrepreneurs, it was found that most of them had full cognizance of the benefits of cooperation and group action. It is recognized that coordinative action of entrepreneurs in a cluster enables its members to avail the facility of raw materials on better terms, have relatively easy access to finances for setting up projects, receive government subsidies, update technology of production, share knowledge and skilled labour, undertake transportation and marketing on mutually advantageous agreement. Mutual information sharing, enhanced cooperative and competitive spirit, flexbile technology and reservoir of skilled labour force inside a cluster prove beneficial to an economy through more efficient use of raw material, efficient use of power, increase in productivity leading to increase in workers' income, a more congenial labour owner relationship, evolution of local leadership and promotion of innovation and creativity.

Selvaraj (2016) collected primary data from a selected set of entrepreneurs in the southern districts of Tamil Nadu. In this paper he studied the involvement and attitude of the sample entrepreneurs regarding the facilities available in the industrial estates. According to him, for a successful industrial estate programme the entrepreneurs need to be be satisfied regarding the facilities available in the industrial estates. Preference is usually expressed for low cost shed, banking facilities, infrastructure facilities, postal service, skilled and cheap labour and the like. Further, follwing Padaki (1994) he constructed an industrial involvement index based on ten dimensions of entrepreneurial trait. The most important enterprise involvement variables observed among the entrepreneurs under the age of up to 30, 31 to 40, 41 to 50 and above 50 are respectively managing various functions, major decisions, managing various functions and training. In order to instill confidence

among the entrepreneurs, he suggested that intensive skill based training should be imparted to the aspirants for setting up work units.

There is a number of studies that focus on the issue of relational capital and associates it with firm performance level. Siddiqui (2014) states that relational capital indicates organizational relation across employees customers, input suppliers, alliance partners, firms within a cluster and other related stakeholders. The basic notion that underlies this concept involves mutual trust, cooperation, friendliness, support etc. embedded in close interactions between internal and external associates of the firm. According to Welbourne (2008) relational capital is described as some form of intangible asset based on development, maintenance and sustenance of good relationship with any organization, individual or group that has impact on firm level achievement. Carlucci (2004) states that investment in relationship with internal and external factors usually generates multiple effects. Thus relational capital may enhance supplier-customer and end-user relationships having impact on the organizational performance.

Chapter Three
Data & Methodology

3.1   Choice of Study Site

The study basically focuses on cluster formation and working in basically four regions**:** Cluster of fishing hooks in Barjora in Bankura district, cluster of Brass/Bell metal utensils in Dharmada and Nabadwip in Nadia district, cluster of Foundry industry in HMC & Bally Municipal area in Howrah district and cluster of hosiery in Shovabazar in Kolkata.

The analytical essence of the study puts stress on the cluster of small enterprises and their formation specifically in the entrepreneurial environment in the context of West Bengal. There are recorded 17 clusters in West Bengal according to the data generated by UNIDO. Purposive sampling is adopted while selecting the clusters.

3.2   Methods of Data Collection

Data are collected on the basis of structured questionnaire method directed to the managers/owners of the respective production units in the clusters. The firms/ rural production units have been selected on the basis of random sampling method.

3.3   Data Collection

Data have been basically collected from primary sources through field level survey of relevant stakeholder groups. These consist of data pertaining to motivation and relational capital, data relating to pursuance of specific strategic apparatus and data pertaining to perceptions of entrepreneurial environment. Personal interview of the entrepreneurs in the relevant clusters based on structured questionnaire have been conducted through skilled field level investigators. Apart from this, secondary sources constitute published information from Govt. and non–Govt. sources such as DC SSI, District gazetteers, Directorate of Industries, research studies on those SSI in those clusters etc. In addition knowledgeable persons like office bearers in

industry associations, bank managers etc. have been interviewed to have better insights into cluster dynamics. Open ended but directed interview schedules have been used to collect information from aforesaid type of persons.

3.4 Analytical Methods

Based on some prior research on human motives to start a business venture six components/ factors have been identified as most important to determine human disposition for taking entrepreneurial drive. Each component is again composed of some sub-components. Two-stage Principal Component method have been applied for finding the factor loading of each component to get an idea of the relative importance of each motive. This also helps develop an overall motivation index. This is done by using the following steps.

The sub-components in each category of motivation are used to form a latent variable. The Eigen values derived after applying the first stage principal component method are used as weights for the principal components in each category. The weighted average of the principal component in each category is considered as the sub-index derived at the first stage. The six sub-indices thus formed are again used to derive principal components. All the possible six principal components are retained to reflect maximum possible variation and they are weighted by corresponding Eigen-values. The weighted mean of these principal components at the second stage yields the motivation index.

Internal consistency of the components of motivational issues are judged by applying Cronbach-α test procedure. Individual sub-indices of motivation factors are used to explain the variation in firm performance through application of a multiple regression analysis.

High and low scoring motives are isolated on the basis of some pre-judgement.

The level of relational capital is measured by quantifying its eight components like Sharing of technological knowledge, Relations with customers, Relations with suppliers of inputs, Informal relations with firms in the cluster, Linkage with external bodies, Location, Trust, Good faith relationship and Reputation.

All these components of relational capital are measured by using a 5 point Likert scale on which 1 = fully disagree and 5 = fully agree. To measure an overall index of relational capital, here also principal component technique has been applied and Cronbach's α test is run to validate the consistency of items in relational capital.

Identification of perceived importance and impact of environmental issues are based on 5 –response categories using the Likert scale.

Here we measure the Environmental factors in terms of Access to Finance from Institutional Source, Attitude of Local Government, Competition from Substitute Product, Underdeveloped infrastructure (electric power, transportation, communications, etc.), Labour Condition, Machinery on Hire Purchase, Availability of Raw Materials, Rules & Regulation Relating to the Registration, Enforcement of Ecological Laws and Transport & Marketing, Administrative procedures (to acquire permits, etc.)

Similarly Strategy factors are identified in the form of Improving Quality Standard, Improving Productivity, Increasing Capacity Utilisation, Expanding Capacity, Diversification Strategies, Reduction in Costs, New Job Creation, Automation and Increasing Sale in Outer Locality.

The most preferred and least preferred strategies are based on the % of respondents choosing either of 5 point categories in the Likert scale and the mean score of variables.

Canonical correlation across the environmental and strategic variables yield the level of consistency in the perception of entrepreneurs.

Chapter Four

Formation Pattern of Different Clusters and Description of Study Region

4.1   Fish Hook Cluster in Barjora Gram Panchayet

The entrepreneurs here in fish hook cluster (located in Barjora panchayat, Bankura), mostly engage in three types of jobs namely, tempering, coloring and packaging. Main raw material like wire is purchased from Kolkata. Quality of wire produced by Usha Martin company is rather good. Many of the producers produce both indigenous and foreign branded hooks. In case of latter type they just try to imitate the quality of foreign products. It is reported by some that fishermen usually want good quality hooks equivalent to those imported from Korea, Japan, Norway etc. Domestic manufacture quality hardly reach the height equivalent to those of foreign products. So while imported hooks have usually higher quality and sell at higher price, those manufactured indigenously are comparatively of lower quality and have lower price. In the year 1988, there was a temporary lull in foreign import and this led to a bigger increase in sale by domestic manufacturers. According to most of the entrepreneurs hook quality is likely to fall if there be a laxity in regular supervision. Most of them did not support know-how sharing as an effective strategy regarding further expansion. They view it as a risk taking business and so in favour of maintaining trade secrecy. But sometimes inter-firm mobility of labour leads to opening of trade secret. This happens when due to circumstances some labour leave a firm for familial problem and after some time join some different firm for earning purposes. Due to paucity of other works, laboring class people have no other alternative than to take to this work for ready earning. They act as agents of revealing the secrecy of earlier firm. However most of them agreed that they maintain cordial relation with customers, input suppliers, fellow firms in order to maintain a healthy scenario in a competitive environment. Further they try to

maintain a good relationship with people in their neighbourhood in order to promote trust about their product and build reputation as an enterprising firm.

Process of production of hooks often gets hampered due to erratic supply of electricity. This disturbs the diversification of quality of hooks. Again supply of hooks often depends on tradition. There exists some fixed buyers group to whom products are sold generation after generation. Hence volume of production and sale cannot be easily enhanced due to this tradition driven bottleneck.

4.2 Problem of Reduced Demand Faced by the Firms in the Cluster

Demand for hooks is closely linked with the intensity of fishing activity/availability of fish in the water bodies/use of substitute technology. However when fishing activity in general goes on declining, there is gradual shortage of demand for fishing hooks that hurt the continuity of work in this cluster.

(a) Due to climate change, the duration of rainy season is shrinking. With consequent less water availability in fishing grounds, potential fishermen/ anglers often abstain from ambitious programme of fishing activity.

(b) In many places, water-tanks, ponds, baors, bheris etc. are being converted into areas suitable for construction of multistoried building. This is also gradually lessening the prospect of fishing activity.

(c) Pond, tank, canal water often get polluted due to release of chemical fertilizer, pesticides etc. through flow of rain water. This also decreases the availability of stock of fish.

(d) Substitute products like high quality fish hooks made in foreign lands is pushing domestic manufacturers into stiff competition for marketing the product. Better durability of foreign made fish hooks with high tempered quality often dampens the demand of domestic manufacturers.

Further harvesting of fish from water-bodies through casting of nets is gradually rising and this is decreasing the prospect fish catch through use of fish hooks.

4.3 Bell Metal and Brassware Cluster of Dharmada

This is situated at Sadar-subdivision of Nadia District. This cluster in Dharmada come under Nakasahipara block. The distance from Krishnagar (district head quarter) to this cluster is twenty five km and it is well connected by road and rail. This cluster mainly manufactures the bell metal and brass ware utensils that are required for domestic purposes and also for other certain occasions like marriage, puja, festival etc. Brass ware products are composed of alloy(copper 60% and zinc 40%) while in case of bell metal it is a bit different (copper: 70% and tin 30%)**.**

4.3.1 History of the cluster & its turning point

No written document that may provide some information relating to the historical background towards formation of this cluster was found available during field survey. Nonetheless, some interviews had at the time of visit, with some knowledgeable old persons residing around the cluster, revealed that this cluster started forming in the middle half of 18th century. Following some historical cause not known to the present local inhabitants, a group of people living at Ballavpur (now situated in Bangladesh) migrated during that period and settled at Bahirgachhi area. Similarly, there was another group who came from Burdwan for same cause and settled down at Sadhanpara area. These migrant people, by caste all Kangshabaniks, were artisans of metal products and they basically worked on various brass/bell metal artifacts that were generally adorned in various furniture & fixture of king's court.

After settling at Sadhanpara and Bahirgachhi, they also started production of aforesaid items since they were reluctant to take farming as their profession. A canal locally called Gurgure which flowed by this cluster, was used as way of goods transport from Kolkata to Murshidabad. Bell metal utensils of Khagra, came to the notice of such artisans owing to this movement and they started sporadic production of such utensils in the cluster.

With the passage of time, after interacting with the counterpart of Khagra based artisans, this activity got a momentum and gradually spread throughout this cluster area.

Up to the end of 19th century this trade was mostly unorganized and confined within the group of migrant artisans. The take off stage of the cluster started from first half to middle of 20th century. Reputed metal traders of Kolkata, Khagra, Nabadwip opened their shops within the cluster and it generated tremendous enthusiasm among the artisans as well as the original inhabitants of this area. Being encouraged, more and more people took to this activity for livelihood and strength of conglomeration amongst the manufacturing firms was on the rise. During Second World War, the rejected bullets available at Dhubulia Military Camp just adjacent to the cluster, had been used as raw-material. Besides the bell scrap, this raw-material was available at very low price.

The cluster experienced a golden time during the first three decades in the post independence period. During the 50s, 60s and 70s, a steady growth of this trade occurred and almost all manufacturing enterprises of this cluster earned huge profit. The wealth, whatever possessed by the artisans at present, accumulated at that time. Reputation of the products of this cluster spread in nearby areas and snatched a considerable local and regional market at that time. Economic upliftment of the cluster stakeholders, had also been observed to a great extent during that period.

This cluster started facing recession since the eighties. The phenomenon, which harmed most the activity in the cluster, was the stiff rise in price of raw-material and coal. Cheaper substitute like aluminium and competing products from outside the cluster (more due to improved transportation system) have adversely affected the growth of brass utensils. This apart, stiff competition with technologically upgraded product, modern design also caused loss of market for the enterprise owners in the cluster. For all these reasons, large exodus of work force from this trade has presently been observed. People involved earlier with this trade, had to venture even outside the state to look for alternative livelihood. Steep fall in the number of firms from nearly 350 to 150 at present is a testimony to this truth. (Moradabad link)

4.3.2 Bahirgachhi and Kadoya (Dharmada Gram Panchayet)

Here most of the people are engaged in making bell metal glass. Only some people in Kadoya also make plates. Four years back, here operated a cooperative which generated the expectation among people about setting up of a big factory. Everybody expressed interest in participating in it. However due to some reason, this

effort did not materialize. People who are engaged now with this industry, hardly get any financial assistance from panchayat or local banks. Earlier in this village, many entrepreneurs were engaged in this work, however day by day, their number is gradually decreasing. Newer generations are not taking interest in this occupation. People who are still performing this job, are mainly carrying on the legacy of their age-old ancestral enterprise. Their pre-occupation with this work is mostly driven by their family tradition. Again many people while acting as labour in others' enterprise, have over time gathered knowledge, skill and amassed some amount of wealth by which they have opened up their new independent establishments. Similarly forefathers of many present factory owners, worked as labour in others' factories and later set up their own enterprises which are still being run by their offsprings.

Many respondents believe that the market for this industry has nowadays shrunk substantially. The metal articles made in Moradabad which are substitute to this bell metal utensils, are marketed at cheaper rates. The demand of bell-metal articles has fallen due to the inroad of those articles made into local markets. Further the number of entrepreneurs in bell metal industry is falling mainly due to lack of adequate amount of capital. This is mainly a sort of cottage industry requiring skilled labour, capital and expanding marketing opportunities. The gradual decline in the prospects of revival sensed by the artisans involved in this work, is dissuading them to motivate their next /future generations from adopting this family job. This explains why new generations are showing their back to this age old practice. Again, since current generation is showing their disinterest to take to this job, the problem of unavailability of skilled labour is gradually surfacing. The people who still remain engaged with this job were earlier motivated by factors like family tradition, larger personal income, independent work, safety and financial security etc. However despite the present unfavourable condition, they are compelled to hang on to this occupation because of lack of alternative skill, low education status, relatively lower wage in daily labour job, lack of opportunities/options in their locality or neighbourhood etc. Because of these reasons they cannot diversify their occupations. Further here, somebody is specialized in making glass, some in plate or in making cup. No single entrepreneur specialize in making three different articles. There exists difference in the technology and art in making different items and this

requires separate training. Due to lack of scope of such training and lack of adequate capital required for setting up the big sized enterprise capable of producing multiple items, people here refrain from extending to a diversified production base.

According to older generation of people engaged in this job since long back, the number of enterprises in the locality have now-a-days decreased compared to what it was earlier. This is mainly because of lessening of the demand of articles made of bell-metal, However, relative demand faced by the existing enterprises has somewhat increased because of shrink in the number of enterprises.

The business in this place is to a great extent controlled by mahajans. The entrepreneurs obtain orders from mahajans who supply the raw materials to them and purchase the finished products. In case of carriage of the raw materials on own responsibility, sometimes the small enterprise owners have to face the harassment by police. However when mahajans bear the responsibility of transporting the raw inputs, no such police harassment has to be faced by the entrepreneurs. Besides this, there exists the problem of shortage of availability of coal. This is not always and easily available in the market. Further in rainy season there arises the problem of dearth of clay availability.

In case of production of glass, there is a twofold division of the work: oven based job and polishing job. Somebody does both types of work and some others only do one type. The people who only perform oven based job, often gets their polishing job done by hire purchase of machinery or by paying money to people owning the polishing machine.

4.4   Brass Ware Cluster in Nabadwip

In matters of making brass ware, Nabadwip located in Nadia district in West Bengal, earned considerable fame In India. People from different regions in and around Bengal flocked here for settling permanently and eking out their livelihood based on this craft. Here in different locations of the town, separate region specific clusters have developed according to making of variety of the brass- product. The craft has flourished on the basis of hereditary adoption of the job focussed on making different types/ variety of the brass ware product. However this craft is gradually on the wane primarily because of lack of capital and its character of being mainly a

cottage based industry. The evolution and pattern of spread of brassware making clusters in mainly four locations are worthy of analysis. These locations are Bablari, Ramsitapara, Basakpara and Ranirghat.

4.4.1   Bablari.

Here the prime product is brass bowl. Some of the entrepreneurial firms here are engaged in both making and polishing of the bowl while some do either of these works. Although many people got enticed to this sphere with the hope of earning a handsome amount, lack of capital and labour have greatly robbed of that scope. People here are also not adequately aware of the loan schemes/opportunities from govt. institutions while some other type of cottage based crafts developed here have been able to reap the benefit of such schemes. They generally don't have any major inhibition to the process of knowledge/technology spillover and many of them are ready to share their knowledge with younger generations while the youth are gradually losing interest in such occupation. Earlier there was a samiti (group) to look after the concerted development of the entrepreneurial craftsmen engaged in such enterprises. There is no more existence of such a samiti now.

4.4.2   Ramsitapara

The enterprises belonging to the cluster in this locality, specialise in the production of various brass metal items like bowl, bell, lamp etc. or else mainly do the polishing job. Many of these produced items are linked with the worship of the deities. With the recognition of the continuing demand base of various brass metal items that are needed during worship of the deities or various social occasions in this religious place, people from nearby localities some two hundred years back, thronged at this region and started this job. The persons engaged in these jobs are interested in maintaining their family tradition. The tradition is continuing since last 200 years as per the statement of some enterprise owner here who belongs to the ninth generation of this family business. The first person in their family line, Balaram Rajbanshi came to Nabadwip and adopted this work. Some of these enterprise owners here are always trying to introduce innovative arts in their product quality. As per their perception they do not face any adversity in the demand condition of their product despite existence of various substitute products. This is because during worship, marriage, social occasions, substitute products cannot compete with the quality and

27

material of their products in the market. With a continuing spate of social occasions, market demand can in no way cast a negative impact on their livelihood.

However here also capital scarcity is a major problem. Even some short term benefit that may be rolled out by the govt, can help flourish their business. Many of the enterprise owners here carry out their activity on the basis of orders based on their link with mahajans. The entrepreneurs here seem to be willing to share their knowledge /technology with others who may express their desire to learn it from them.

4.4.3   Basakpara

The firms belonging to the cluster here are associated with the making of brass pitcher, plate etc. Here also the work is being continued on family tradition basis. The roots of most of the families here are linked with immigrants from Bangladesh about 150 years back who came to settle here in order to earn their living. The problem of market demand does not bother these enterprising people since their products have a perennial demand base during year long various worships, marriage, first rice ceremony of children etc. Hence they feel that substitute products do not hamper the prospect of their business.

The firm owners in this region mostly belong to Kangsabanik caste. These people are careful to restrict the technology or art of their work amongst the people in their own caste. Neither do they ventilate their knowledge/skill to people outside their family or own caste nor do they employ labour from outside their own sect. The firms belonging to the cluster here have their own kangsabanik samiti. The secretary of this samiti belongs to the same caste and the labourers also are members of this samiti. In recent years however the firm owners are sensing some shift of demand due to preferences among younger generation towards substitute products and increase in the number of firms among their own caste.

Here all the enterprise owners work on some subcontracting basis linked with mahajan. The raw materials and work order are provided by the mahajans. They are supposed to complete their work and supply the finished product to the mahajans in a stipulated time period. Usually they don't have the freedom to individually sell their product in the market. However many of them are trying to raise individual

business which often get thwarted due to lack of adequate capital. Here handloom industry also has been flourishing in some cases. But the kangsabanik people have a grievance against the discriminatory treatment meted out to them by local administration who provide short term capital to handloom artisans while neglecting their capital problem.

4.4.4   Ranirghat

This region is located beside the river bank in Nabadwip and by the market area. Here the clustered firms are engaged in producing bowl, pitcher, and all kinds of worship related materials. These people simultaneously carry out both individual business and are also linked in the subcontract chain with mahajans. Order placed by mahajans are to be delivered within the stipulated time. Because of linkage with mahajans they do not face any capital problem. This is because raw materials are provided by mahajans which is translated into final product through use of their own/hired labour. The wages given by mahajans for this job covers labour cost, other raw material cost and some incentive amount. But in case of individual business, many of them cannot bear the expenses involved in arranging raw materials. Hence despite their desire, they cannot shift to individual business basically because of financial problem.

4.5   Howrah Foundry Cluster

In Howrah district the foundry units are clustered mainly around the regions Belgachia, Das nagar, Balitikuri and Salkia. The foundry units here are quite old, set up about 70 years back. They are specialized in making different types of iron casting products among which handpump, pipe filter, compressors, rice mill parts, gear body, pulley machinery parts, automobile parts are worth mentioning. The foundry industry has been developed based on family business where several generations have been engaged in earning their livelihood and working for its growth. Present generation has focused attention on export orientation of foundry products by using available sophisticated technology. In many cases the product are being exported to states like Bihar, Jharkhand, Punjab etc. The industry is often plagued by the scarcity of skilled labour. Apart from it, this industry also requires physical labour. During the work of NREGA programme and during agricultural season, general labour easily get employment around their localities and so this

industry suffers from labour problem. Its impact is adversely channelised on to profitability and defaulting in meeting the orders. However the problem of shortage of skilled labour persists even if general labour be available.

4.6 Shovabazar Hosiery Cluster

Shovabazar, located in the northern part of Kolkata, is one of the oldest places in it. This area is rich with activities of about 450 entrepreneurs out of whom 70-80% are associated with knitting job. The rest usually take part in final production activity and its sale in the market.

Earlier many of these entrepreneurs were engaged in trading with rice. But suddenly they confronted with loss in this trade and began to diversify to hosiery activities during the decade of sixties. The activity in hosiery is divided into four stages, knitting, cutting, stitching and embroidery. In the early stage, the entrepreneurs themselves operated in the input market and produced the final product by going through all the four stages. But nowadays many of the hosiery enterprise owners work on subcontracting basis. Due to this, it is observed that a good number of enterprise owners are engaged in a single stage activity. Most of the surveyed owners are engaged in knotting operation. At a time one hosiery entrepreneur gets associated in knitting activity for many big industries and local industries on subcontract basis. This lessens the risk of operation for subcontracting entrepreneurs. The big firms are LUX RUPA, VIP, DOLLAR etc. At present there are some entrepreneurs who themselves sell their products to big firms by operating in all the four stages of production. This involves greater risk of operation on their part.

The hosiery industry in this region is mostly in sick state now. One important reason behind it is the lack of appropriate advertisement. Generally people from two sects are associated with this industry, (i) People from Bengalee sect who have exerted pioneering effort in its initial flourish (ii) another sect constitutes the non-Bengali people mostly marwaris. In the absence of proper business acumen and dexterity, Bengalee entrepreneurs are faltering in enhancing the status of this old industry.

During British regime this industry was at the hands of Bengalees. But now a major part of it is being controlled by the non-Bengalee people. One major reason behind it

is the continuous strike for 70 days in 1978, which shook the edifice of hosiery industry. The major objective of this strike was to demand increased wage and ensure not more than 8 hours of work for the labourers. Although the labour demands were met, another strike for a continuous stretch of 5 months during 1984 unsettled the flow of work in this industry. This had a severe adverse impact on the business run by the Bengalees. Despite this indefinite strike, a small number of entrepreneurs with patronage from the govt., managed to continue their business in some other region. Due to its closure, Shovabazar industry during this period confronted with great loss while that in other areas flourished at an unhindered pace. At present the region lacks in the availability of adequate number of skilled labourers. Because of this reason, existing entrepreneurs there, seem reluctant in passing over the baton of this industry to their offsprings.

Chapter Five
Analysis of Motivation Issues of Entrepreneurs

5.1 Concept of Motivation and Its Different views

It is often said that fulfillment of a person's desire to undertake some new venture is influenced by how deeply he likes to be involved in it, his willingness and intention to go ahead and flourish in the business world. Success of the prospective entrepreneur depends on how he copes with the odds and seizes the opportunities that may be coming on the way. Sensing the emerging opportunities and grabbing them at the appropriate time, putting efforts at consolidating the resources and designing the mechanisms for pursuing the goal–all depend on how intensively the entrepreneur feels to follow his course of action and his willingness to play the game. This is linked to factors like traits, attitudes, determination of human agency which can be clubbed under the view of entrepreneurial motivation. Thus Aldrich and Zimmer (1986, p.3), write, "Entrepreneurial activity can be conceptualized as a function of opportunity structures and motivated entrepreneurs with access to resources''.

Plehn-Dujowich (2010), states that the decision to start a business is based on two bases: rational and motivational. The rational basis stresses the objective factors (including the environmental conditions) to undertake the task, that support or punish certain behaviors (Skinner 1987) while the motivational basis refers to subjective factors that reflect the decision maker's inclinations and expectations. Further the limitations of rational model (because of lack of information) to predict human behaviour prompted Simon (1976) to propose motivation for supplementing the explanations of human behavior: According to his arguments an individual's behaviour is influenced by accepting a priori set of assumptions which are governed by the motivation and impulse to act in a specific manner.

Evidence (Amorós, J. E. et al, 2009, Edelman, F.et al, 2010, Gorgievski, M.,et al 2011, Jayawarna, D.,et al 2011), suggests that entrepreneurial motivation matters in

shaping firm performance and strategic decision which influence the business outcome. Differences in entrepreneurial motivations also influence the differential in firm performance, entrepreneurs' investments in their firms, the relative success in turning start-up efforts into operative fruitful business venture. The emerging studies in this area as well as existing studies point to the importance of entrepreneurial motivation from the viewpoint of both research and policy initiative.

In the context of highly populated developing countries, this motivation factor assumes great significance. This is because in such countries like India there exists huge scale of unemployment and lack of opportunities for white collar jobs. Hence adopting business/setting up industrial production units happen to be a major avenue for earning for a big chuck of unemployed population. But often there does not exist the appropriate mindset among the youth for taking to these entrepreneurial activities. Hence the analysis and assessment of the motivation factors that drive at least some part of the population to these enterprising occupations, seems extremely imperative for replication and extension to the society at large. And this assumes special importance specially in case of clustered small and medium scale firms. In this context it seems imperative (a) to have a comparative analysis of the ranking of various items of motivation as perceived by the respondents in an industrial cluster (b) to analyse the reliability of various items of motivation for assessing their consistency (c) to develop an index of motivation on the basis of principal component technique and find the level of association between motivation index and firm performance level.

There are different analytical views on the concept of motivation contributed by different people at different times. For instance Vroom developed the expectancy theory in 1964 pertaining to factory- site motivation. According to expectancy theory, human beings act according to their conscious expectations that a particular behavior will lead to achieve a specific outcome. Three components of Expectancy theory are:

Expectancy: The belief that a person's effort will result in attainment of his desired goals.

Instrumentality: The belief by a person that a reward will be gained if the performance expectation is met.

Valence: The relative attractiveness of value of the reward to the person.

Again there is a view that motivational variables are only a subset of certain kind of variables that influence the success of SMEs. These variables are (1) the psychological and personality traits of entrepreneurs, (2) the managerial skills, training and intelligence of entrepreneurs and (3) the external environment (Benzing, Chu and Kara 2009). Psychological factors like entrepreneurial traits, spirits and innovative outlook and attitude toward challenges in life have been observed to be related to success (Brantjes and Hoorn, 2002), and this motivation factor assumes great importance, particularly in dealing with a difficult business environment. Thus human action is assumed to be shaped by individual drivers including both motivation and cognitive elements including ability, intelligence, and skills (Locke, 2000a). Apart from individual drivers, there are contextual drivers like regional and national characteristics that combine together into external factors. These include the status of the economy (local political stability, currency stability, Govt. regulations etc), the availability of venture capital, the forces of competition, credit availability and legal restrictions, which also shape the entrepreneurial functions. In order to segregate the impact of motivation on entrepreneurial action, there needs to be a control of these external factors which could have a causal relationship with entrepreneurial actions and outcome, There is either implicit or explicit agreement among economists about the need of control of these categories of factors in order to measure the effect of motivations on the entrepreneurial process.

Leaving aside the external factors as stated above, a two-way categorization of human motivation factors is proposed by Amabile (1993) when he states that these factors can be divided into two broad terms, extrinsic and intrinsic. He interprets that people are intrinsically motivated if they seek independence, fulfillment of ambition, satisfaction of curiosity, self-respect or love to face challenges. On the other hand extrinsic motivation is related to attaining a goal from doing the work and not the work itself. This view finds support in the works of Deci (1972), when he states that a person is intrinsically motivated when he/she conducts the activity without

expecting any reward. Extrinsic motivation emerges from the desire for the result of the work, not based on the work itself. This classification includes financial and material rewards as extrinsic results of a business. These results are conditioned by the performance of the company andis attainable at a later stage after startup. On the contrary intrinsic rewards involve psychological gain of the entrepreneur from the very beginning, in terms of self-satisfaction, esteem in the eyes of the society, being in control of own destiny and bearing the challenges for success of the enterprise.

While there are a number of such characterizations of entrepreneurial motivation, there is no doubt that psychological inclinations of the entrepreneur can be decomposed into several dimensions accounting for the entrepreneur's motivation to start the business.

For a rigorous analytical exposition, it is viewed that the following six dimensions capture entrepreneurial motivation in sufficient breadth and depth:

- Achievement and challenge

- Material well being

- Independence & autonomy

- Creativity

- Leadership & social status

- Family & Roles

Overall seventeen motivational variables linked with the aforesaid six dimensions, are considered based on prior research on human motives that are supposed to influence human decision regarding setting up of entrepreneurial ventures.

5.2 Description of the motivation items

Material well-being motive is linked with enjoying higher personal income and it also captures the tendency to combine financial success with family financial security. This is particularly manifest in studies of entrepreneurs in deprived and less developed regions in developed countries and studies in developing economies (Jayawarna et al. 2011; Uddin & Kanti 2013). Hence this motive is decomposed into two items

(i)   Earning larger personal income

(ii)   Safety and security in consumption

The motive of enjoying autonomy in work sphere can be considered as a psychological trait or a driver that enhances entrepreneurship. This can be viewed in terms of the following items

(iii)   Aspiration for doing independent work

(iv)   Greater flexibility in personal and family life

Creativity refers to the inclination towards making something new and introducing innovativeness in the work process. This is viewed in terms of

(v)   Desire to do something new apart from stereotyped job

(vi)   Desire to introduce novelty in work

Following McClelland (1961), the need for achievement has been associated with a strong desire to do things well, or outperform others, for gaining self-satisfaction. People with a high need for achievement are likely to enjoy taking personal risk and responsibility and prefer quick, direct outcomes for their actions. This can also be linked with individual trait of identity fulfillment. The achievement and challenge taking motive can be   factored into two statements

(vii) Earning satisfaction from one's own work and

(viii) Facing challenges in life

Recognition and social status: This dimension refers to the motive of gaining social status in terms of recognition for leadership and respect from friends, family and society at large .This , can be further viewed in terms of the following separate five indicators .

(ix) Earning respect in the eyes of the society /fellow producers

(x) Ambition to excel others through leadership development

(xi) Desire to dominate and influence others

(xii) Desire for social interaction through working in a group

(xiii) Deontic motive which implies one's duty or obligation or commitment to assume (entrepreneurial) task and responsibility for others' interest. It is supposed to emerge from a sense of duty and / or a feeling of obligation.

Family and role models imply some sort of embeddedness in family or friend circle from which motivation emerges. This dimension refers to the aspiration to maintain a family tradition as well as pursue the instance of some role models in the society. Sometimes this dimension also stresses the need for building a family legacy. This can be structured in terms of the following components

(xiv) Continuing a family tradition

(xv) Emulating successful fellow entrepreneurs

(xvi) Gaining respect from friend

(xvii) Building business for future generation

5.3   Case of Barjora Fish-Hook Producing Cluster

5.3.1 Data and Method

For purpose of study, data were collected from all the clustered firms producing fish hooks in Barjora region of Bankura district in the state of West Bengal in India. Since only 16 firms were located in the cluster, all of them were covered in the study on the basis of face to face interview with the owner of the firms, based on a pre-structured questionnaire. The owners were favoured as respondents to the questions,

since they shouldered the day-to-day management responsibility and actively participated in overall decision making process.

For analytical understanding of variation in motivation factor across the entrepreneurs, it seems important to construct a single index based on diverse motivational items. Preparing an overall motivation index based on the reported data by the respondents requires the consideration of individual sub-indices of motivation viz. Material well-being, Autonomy, Creativity, Identity fulfillment, Social status and embeddedness. These respective sub-indices again are based on several components pertinent to specific sub –index category. Both the overall motivation index and sub-indices are considered as latent or unobserved variable. Here the problem is the weight assignment to the indicators or sub-indices which is critical to maximize the information from a data set included in an index. A good composite index should comprise important information from all the indicators, but not be strongly biased towards one or more of these indicators. Taking a cue from Cámara and Tuesta (2014), we apply two-stage principal components methodology to estimate the degree of motivation as perceived by the different entrepreneurs. Since the sub-indices are likely to contain inter-correlated indicators, we estimate the sub-indices first, rather than directly estimating the overall index.

First of all, the six individual sub-indices are constructed by using principal component method. Second, we estimate the dimension weights and overall motivation index by using the dimensions as explanatory variables.

Hence we assume that the latent variable like overall motivation index (OMI) can be expressed as a linear function as follows:

$$OMI = \alpha_1 I_i^W + \alpha_2 I_i^A + \alpha_3 I_i^C + + \alpha_3 I_i^I + + \alpha_3 I_i^S + + \alpha_3 I_i^E + e_i$$

Thus for instance, material well-being index (I^W) as a latent variable is supposed to be determined by variables like larger personal income (X_{1i}) and safety and security motive (X_{2i}). Here I^W can be considered as a latent variable, which is unobserved. In linear form it is represented as

$$I_i^W = \beta_1 X_{1i} + \beta_2 X_{2i} + + u_{1i} \qquad \text{-------------------------- (1)}$$

Similarly in case of autonomy, the corresponding index I^A as a latent form is supposed to be determined by a number of variables aspiration for doing independent work (Y_{1i}) and greater flexibility in personal and family life (Y_{2i}). In linear form it stands as

$$I_i^A = \gamma_1 Y_{1i} + \gamma_2 Y_{2i} + u_{2i} \qquad \text{-------------------- (2)}$$

Further in case of creativity we consider the corresponding index as a latent variable linearly determined by two relevant components. The components are denoted as Z_{1i} (Desire to do something new apart from stereotyped job), Z_{2i} (Desire to introduce novelty in work) respectively.

In latent form this is expressed as

$$I_i^C = \delta_1 Z_{1i} + \delta_2 Z_{2i} + u_{3i} \qquad \text{---------------- (3)}$$

Similarly for identity fulfillment, social status and embeddedness we consider latent variables as $I_i^I, I_i^S, and\ I_i^E$ respectively.

These are written as

$$I_i^I = \sigma_1 U_{1i} + \sigma_2 U_{2i} + u_{4i} \qquad \text{---------------- (4)}$$

$$I_i^S = \theta_1 V_{1i} + \theta_2 V_{2i} + \theta_3 V_{3i} + \theta_4 V_{4i} + \theta_5 V_{5i} + u_{5i} \qquad \text{------------------ (5)}$$

$$I_i^E = \lambda_1 W_{1i} + \lambda_2 W_{2i} + \lambda_3 W_{3i} + \lambda_4 W_{4i} + u_{6i} \qquad \text{------------------ (6)}$$

We denote λ^W_j (j= 1 , 2)   as the jth Eigen value in case (1), λ^A_j (j = 1, 2) as the jth Eigen value in case (2), λ^C_j (j= 1, 2) as the jth Eigen value in case (3), λ^I_j (j= 1,2) as the jth Eigen value in case (4), λ^S_j (j= 1, 2 , 3 , 4 ,5) as the jth Eigen value in case (5), λ^E_j (j = 1, 2 , 3 ,4) as the jth Eigen value in case (6). Subscript j refers to the number of principal components in each respective case that also coincides with the number of corresponding indicators. Noting that the values of λ_j gradually falls as the suffix increases in each case, we denote P^W_j (j = 1, 2) as the jth principal component in case (1), P^A_j (j= 1, 2). As the jth principal component in case (2), P^C_j (j =1,2) as the jth principal component in case (3), P^I_j (j =1,2) as the jth principal component in case of (4), λ^S_j (j =1,2, 3 , 4 , 5) as the jth principal component in case of (5) and λ^E_j (j = 1,2,

3) as the jth principal component in case of (6).We get the corresponding estimator of each dimension according to the following weighted averages:

$$I^W = \frac{\sum_{j=1}^{2} \lambda_j^W . P_j^W}{\sum_{j=1}^{2} \lambda_j^W}$$

$$I^A = \frac{\sum_{j=1}^{2} \lambda_j^A . P_j^A}{\sum_{j=1}^{2} \lambda_j^A}$$

$$I^C = \frac{\sum_{j=1}^{2} \lambda_j^C . P_j^C}{\sum_{j=1}^{2} \lambda_j^C}$$

$$I^I = \frac{\sum_{j=1}^{2} \lambda_j^I . P_j^I}{\sum_{j=1}^{2} \lambda_j^I}$$

$$I^S = \frac{\sum_{j=1}^{5} \lambda_j^S . P_j^S}{\sum_{j=1}^{5} \lambda_j^S}$$

$$I^E = \frac{\sum_{j=1}^{4} \lambda_j^E . P_j^E}{\sum_{j=1}^{4} \lambda_j^E}$$

Although usually the whole set of causal variables is replaced by a few principal components, which account for a substantial percentage of the total variation in all the sample variables, here we consider as many components as the number of explanatory variables. This is due to our concern to estimate accurately the sub-indices of motivation rather than truncating the data in order to avoid discarding information that could affect our estimates. Thus this procedure accounts for 100 per cent of the total variation in the data.

Second stage principal component analysis is run to compute the overall motivation index (OMI) by following the steps outlined above, whereby we get

$$OMI = \frac{\sum_{j=1}^{6} \lambda_j' P_j'}{\sum_{j=1}^{6} \lambda_j'}$$

The highest weight, λ_1', is attached to the first principal component since it accounts

for the largest proportion of the total variation in all explanatory variables. As the suffix increases the proportion ofvariance explained by the respective principal components decrease. Using algebra, each component, $Pj^/$ can be expressed as a linear combination of the six sub-indices as

$$P_1^/ = \theta_{11} I^W + \theta_{12} I^A + \theta_{13} I^C + \theta_{14} I^I + \theta_{15} I^S + \theta_{16} I^E$$

$$P_2^/ = \theta_{21} I^W + \theta_{22} I^A + \theta_{23} I^C + \theta_{24} I^I + \theta_{25} I^S + \theta_{26} I^E$$

$$P_3^/ = \theta_{31} I^W + \theta_{32} I^A + \theta_{33} I^C + \theta_{34} I^I + \theta_{35} I^S + \theta_{36} I^E$$

$$P_4^/ = \theta_{41} I^W + \theta_{42} I^A + \theta_{43} I^C + \theta_{44} I^I + \theta_{45} I^S + \theta_{46} I^E$$

$$P_5^/ = \theta_{51} I^W + \theta_{52} I^A + \theta_{53} I^C + \theta_{54} I^I + \theta_{55} I^S + \theta_{56} I^E$$

$$P_6^/ = \theta_{61} I^W + \theta_{62} I^A + \theta_{63} I^C + \theta_{64} I^I + \theta_{65} I^S + \theta_{66} I^E$$

Hence overall motivation index can be expressed as

$$OMI = \left(\sum_{j=1}^{6} \lambda_j^/ \left(\theta_{j1} I^W + \theta_{j2} I^A + \theta_{j3} I^C + \theta_{j4} I^I + \theta_{j5} I^S + \theta_{j6} I^E \right) \middle| \sum_{j=1}^{6} \lambda_j^/ \right)$$

5.3.2 Relative Perceived Importance of Motivation Items

The following table 5.1 gives a brief view about the various components of motivation. The mean and corresponding rank values indicate the relative perceived importance of the motivation items. From top three items, it clearly appears that income earning is the most important item in influencing an entrepreneur to start his enterprise. Next most important issue appears to be ensuring safety and family's present and future financial security together with the desire for doing independent work. Earning satisfaction from doing own work, happens to be the third most important item from the top. Similarly the least important item from bottom appears to the desire to dominate others. Gaining respect from friends happens to be the next least important item while desire for social interaction occurs as the third least important item of motivation. Excepting four items like deontic motive, desire to do something new, desire to introduce novelty in work and emulating successful

entrepreneurs, in all other cases a great % of entrepreneurs had a high motivation value greater than or equal to mean.

Table 5.1: Mean Value and % of Respondents with High Value of Motivation, Barjora

Motivation Item	% of entrepreneurship with high motivation value greater than or equal to mean	% of entrepreneurship with high motivation value less than mean	Mean	Rank
Larger personal income	62.5	37.5	4.5625	17
Safety and security motive	68.75	31.25	4.5	15.5
Aspiration for doing independent work	62.5	37.5	4.5	15.5
Earning satisfaction from one's own work	43.75	56.25	4.3125	14
Greater flexibility in personal and family life	50	50	4.25	12.5
Deontic motive	43.75	56.25	4.25	12.5
Desire to do something new apart from stereotyped job	43.75	56.25	4.125	9.5
Desire to introduce novelty in work	25	75	4.125	9.5
Emulating successful fellow entrepreneurs	37.5	62.5	4.125	9.5
Build business for future generation	50	50	4.125	9.5
Facing challenges in life	68.75	31.25	3.9375	6.5
Earning respect in the eyes of the society /fellow producers	81.25	18.75	3.9375	6.5
Ambition to excel others through leadership development	68.75	31.25	3.875	4.5
Continuing a family tradition	68.75	31.25	3.875	4.5
Desire for social interaction through working in a group	75	25	3.75	3
Respect from friends	68.75	31.25	3.625	2
Desire to dominate and influence others	68.75	31.25	3.5	1

Source: Author Calculation based on Field Survey on 2016

5.3.3 Motivation Indices

Based on the first stage principal component method, the individual sub-indices of material well-being, autonomy, creativity, identity fulfillment, social status and embeddedness are presented in the columns 2 to 7 in table 2. The eighth column represents the overall motivation indices based on two stage principal component method while column nine represents per capita profitability from entrepreneurial work. It is observed that creativity index has the highest standard deviation while embeddedness has the lowest across the 16 respondents. It is so because people have varying knack or attitude towards introducing novelty or undertaking innovative

enterprising work. Further they are mostly motivated by earlier family tradition, neighbours or friends doing similar works.

Table 5.2: Sub-Indices of Motivation Items and Overall Motivation Index, Barjora

Sl. No. of respondent	Sub-Index W	Sub-Index A	Sub-Index C	Sub-Index I	Sub-Index S	Sub-Index E	Overall Motivation index	Per capita Profitability
1	0.848373	0	0	0.481249	0.427365	0.19238	0.25189	500
2	1.084076	1.226722	0.711413	0.662947	0.574674	0.27844	0.93021	1137
3	1.084076	1.226722	0.711413	0.602381	0.327914	0.17203	0.86246	1461
4	0.235702	1.226722	1.243896	0.78408	0.547526	0.25435	0.99682	1600
5	1.084076	0.99102	1.243896	0.78408	0.536977	0.22337	0.97819	4000
6	1.084076	0.99102	0.532483	0.541815	0.470797	0.27844	0.77164	1080
7	0.848373	1.226722	0.890342	0.420682	0.351106	0.16962	0.85778	1200
8	0.895591	0.34641	0.890342	0.481249	0.490981	0.1717	0.58993	1080
9	0.895591	1.226722	0.890342	0.057285	0.324799	0.12476	0.78822	1667
10	1.084076	1.226722	1.243896	0.541815	0.557605	0.12476	1.00185	4200
11	0.188484	1.053517	0.711413	0.420682	0.19511	0.12394	0.66932	800
12	1.084076	0.817815	0.17893	0.360116	0.368256	0.18673	0.56485	625
13	1.084076	0.99102	0.711413	0.602381	0.566374	0.21772	0.82552	1180
14	1.084076	1.226722	0.711413	0.78408	0.528677	0.26581	0.94109	1630
15	0.895591	0.817815	0.532483	0.481249	0.509829	0.19247	0.67461	1500
16	0.659889	0.817815	1.243896	0.481249	0.498415	0.23483	0.82979	3500
S.D.	0.291826	0.35291	0.366333	0.183997	0.110793	0.052636	0.19766	

Source: Author's Calculation based on Field Survey on 2016

5.3.4 Internal Consistency of Motivation Items

The reliability of the instrument used for measuring motivation items is provided by the Cronbach's alpha coefficient which reflects the level of internal consistency of the indicators. It is computed by correlating the score for each item with the total score for each observation and then comparing that to the variance for all individual indicator scores.

Where $\alpha = (k/k-1) (1- \sum \sigma^2_{yi}/\sigma^2_x)$, Where k refers to the number of motivation items

σ^2_{yi} indicates to the variance associated with indicator / item i

σ^2_x implies the variance associated with the observed total scores

Alpha coefficient value ranges from 0 to 1 and proves useful in describing the reliability of factors extracted from likert multi-point formatted questionnaires or scales (i.e., rating scale: 1 = most unfavourable, 5= most favourable). Higher value of the score, indicates better reliability level. According to Nunnaly (1978), 0.7 can

be considered as an acceptable reliability coefficient. However in specific cases lower thresholds are not uncommon in the literature. In the present case the value of alpha, based on seventeen motivation items, emerges as 0.706 which is indicative of reasonably good reliability of the instrument used for measuring motivation items. However alpha if some item is deleted, as depicted in table-5.3, is also an important element in this context. It is representative of Cronbach alpha reliability coefficient for internal consistency if some individual item is removed from the scale. Thus as shown in table-5.3, if item (i), (iv), (xiii), (xiv) or (xv) were removed, the reliability of instrument used for measuring motivation factor would somewhat rise to values like 0.712, 0.707, 0.719, 0.726 and 0.734 respectively. Other variables are important as their omission decrease the value of the alpha coefficient.

Table 5.3: Item-Total Statistics, Barjora

Item no	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
(i)	64.8125	49.896	0.712
(ii)	64.8750	44.783	0.682
(iii)	64.8750	43.050	0.663
(iv)	65.1250	47.317	0.707
(v)	65.2500	45.533	0.691
(vi)	65.2500	45.933	0.682
(vii)	65.0625	48.463	0.704
(viii)	65.4375	43.996	0.683
(ix)	65.4375	46.396	0.690
(x)	65.5000	40.000	0.656
(xi)	65.8750	39.983	0.657
(xii)	65.6250	41.450	0.666
(xiii)	65.1250	49.850	0.719
(xiv)	65.5000	46.933	0.726
(xv)	65.2500	51.533	0.734
(xvi)	65.7500	46.067	0.695
(xvii)	65.2500	43.533	0.686

Source: Author's Calculation based on Field Survey on 2016

5.3.5 Regression Results

It may be noted that the performance of an enterprising firm can be measured by the profits that it earns during its functioning or by the value of per capita earnings from the enterprise. The simple correlation between per capita profit and overall motivation index for the surveyed entrepreneurs appear to be 0.588 which is significant at 1% level. It implies that higher the motivation index, higher is the involvement of the entrepreneurs in entrepreneurial operation and their increasing aggressiveness in reaping higher profit. In order to have a more clear understanding

of the impact of motivation items at a disaggregated level, we consider all the six sub-indices of motivation and consider all of them as explanatory items together with entrepreneur's per capita profitability. At such disaggregated level, these variables are assumed to influence the variation in per capita profitability in a linear form of the regression model. The corresponding results are tabulated in table 5.4. It is observed that the coefficient of sub-Index W has expected positive sign and is moderately significant at 15% level; while Sub-Index C is significant at 1% level with expected positive value of its coefficient. Others appear to be insignificant. The Overall regression is observed to be more or less good fit as evident from the value of R^2 which is 0.736 and the F statistic being 4.185 which is significant at 3% level.

Table 5.4: Results of Linear Regression, Barjora

	Unstandardized Coefficients		Standardized Coefficients	t-values	Significant Level
	B	Std. Error	Beta		
(Constant)	-893.800	1107.347		-.807	.440
Sub-Index W	1361.464	873.005	.345	1.560	.153
Sub-Index A	-591.526	752.253	-.181	-.786	.452
Sub-Index C	2765.100	872.581	.879	3.169	.011
Sub-Index I	734.624	1605.017	.117	.458	.658
Sub-Index S	708.517	3357.666	.068	.211	.838
Sub-Index E	-4509.707	6070.345	-.206	-.743	.476
R^2	0.736				
F	4.185				0.027

Source: Author's Calculation based on Field Survey on 2016
*Dependent Variable: Per capita Profit

5.3.6 Remarks

The study reveals that entrepreneurs in the concerned region are primarily mostly motivated by the desire to earn some income from this occupation in the absence of alternative job prospects or acquired skill, they are pressed by the responsibility of providing financial safety and security of the members in the family and pleasure of doing some independent work. Given the fact that income earning opportunity in a vastly populous developing country like India is relatively low, and hence people are greatly concerned about how to provide financial security of family members through independent work, this finding is in coherence with what might be expected in such condition.

The significance of sub-Index_W and sub-Index_C influencing profitability have multiple implications. As a composite of several individual items, this suggest that,

larger personal income, safety and security motive, desire to do something new and desire to introduce novelty in work, have in a round-about way substantial influence in determining the profitability per capita for the entrepreneurs. Again Govt. in a developing country cannot ignore its responsibility in motivating young generation people to undertake entrepreneurial operation. For this purpose, Govt. should take active steps in organizing seminars, symposia, workshops in order to disseminate the urge for adopting entrepreneurship as a career and motivate more and more people to do something new apart from stereotyped white collared job. In allocating the budget, high priority should be given to attract unemployed youth to this option and this might at least partially solve the unemployment problem in India.

5.4   Analysis of a Cluster of Bell-metal Enterprises in Dharmoda:

5.4.1 Relative perceived importance of motivation items

From table 5.5 it is evident that earning satisfaction from one's own work happens to be the most important motivation item as per the perception of the entrepreneurs. Next most significant item happens to be   aspiration for doing independent work. Facing challenges in life emerges as the third most important item that motivates the owners of enterprises here. The prime stress put on these motivations indicate that the entrepreneurs are aggressive enough to take to independent business venture in order to quench their creative drive. The least important item from bottom happens to be desire to dominate others. Desire to do something new apart from stereotyped job appears as the next least important item in the perception of the enterprise owners while ambition to excel others through leadership development is considered as the third least important item from bottom.

Table 5.5: Mean Value and % of Respondents with High Value of Motivation, Dharmoda

Motivation Item	% of entrepreneurship with high motivation value greater than or equal to mean	% of entrepreneurship with high motivation value less than mean	Mean	Rank
Larger personal income	66.7	33.3	3.80	7
Safety and security motive	61.7	38.3	3.65	5.5
Aspiration for doing independent work	36.7	63.3	4.25	16
Earning satisfaction from one's own work	38.3	61.7	4.28	17
Greater flexibility in personal and family life	60.0	40.0	3.65	5.5
Deontic motive	58.3	41.7	3.58	4
Desire to do something new apart from stereotyped job	43.3	56.7	3.37	2
Desire to introduce novelty in work	83.3	16.7	3.82	8
Emulating successful fellow entrepreneurs	83.3	16.7	3.92	10
Build business for future generation	85.0	15.0	3.93	11
Facing challenges in life	25.0	75.0	4.08	15
Earning respect in the eyes of the society /fellow producers	13.3	86.7	3.95	12
Ambition to excel others through leadership development	43.3	56.7	3.43	3
Continuing a family tradition	45.0	55.0	4.00	14
Desire for social interaction through working in a group	18.3	81.7	3.98	13
Respect from friends	83.3	16.7	3.83	9
Desire to dominate and influence others	36.7	63.3	2.20	1

Source: Author's Calculation based on Field Survey on 2016

Reliability or internal consistency of the components of motivation yield the Cronbach's alpha value as 0.797. On this basis it is found that if the 14th item (Continuing a family tradition) of motivation is deleted then the value increases to 0.814.

Table 5.6: Item-Total Statistics, Dharmoda

Item No	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
(i)	60.800	46.739	0.783
(ii)	60.950	49.370	0.792
(iii)	60.350	47.418	0.777
(iv)	60.317	47.169	0.775
(v)	60.950	44.455	0.771
(vi)	61.017	44.288	0.768
(vii)	61.233	43.911	0.765
(viii)	60.783	49.257	0.793
(ix)	60.683	48.932	0.784
(x)	60.667	50.260	0.790
(xi)	60.517	50.762	0.794
(xii)	60.533	50.389	0.793
(xiii)	60.417	50.484	0.793
(xiv)	60.600	49.498	0.814
(xv)	60.617	49.020	0.784
(xvi)	60.767	52.114	0.797
(xvii)	62.400	43.329	0.797

Source: Author's Calculation based on Field Survey on 2016

Results of the regression indicate the impact of disaggregated sub-index values on per capita profitability aspects. Overall the regression is found to be moderately good fit as is evident from the significance of R^2 value.

Table 5.7: Results of Linear Regression, Dharmoda

Independent Variable	Coefficient	t –Value	Significance
(Constant)	7.747	96.572	.000
Sub-Index W	.027	.488	.628
Sub-Index A	.191	3.114	.003
Sub-Index C	-.030	-.601	.550
Sub-Index I	-.085	-.940	.351
Sub-Index S	-.044	-.410	.684
Sub-Index E	.161	1.166	.249
F	2.562		.030
R^2			.225

Source: Author's Calculation based on Field Survey on 2016
*Dependent Variable: Per capita Profit, source: Author's calculation

However only the coefficient of the sub-index autonomy appears to significantly positive as expected. This aligns with the perception of the entrepreneurs.

5.5   Analysis of Bell Metal Cluster in Nabadwip

5.5.1   Relative importance of motivation items

In Nabadwip the entrepreneurs engaged in bell metal cluster reveal a varied form of ranking of the motives behind their choice of this job. The two most important motives from the top (as revealed in table 5.8) that goaded their choice happen to be Aspiration for doing independent work, and Deontic motive, while the 3rd rank is shared by four motives like, Earning satisfaction from one's own work, Earning respect in the eyes of the society /fellow producers, Emulating successful fellow entrepreneurs and Respect from friends. This place being famous for religious pursuit and having historical importance offer good opportunities for business depending on the demand of tourists and worship during religious occasion. For this reason the entrepreneurs find interest to pursue independent work in preparing diverse worship items like, Kasar, Jhampo, Kalsi, Ghara, Barandala, pradip, Dhunuchi, Dabur and Simhasan. They consider this job as their responsibility since they are located in this region and pursuing this work from the day of their ancestors. In order to find satisfaction in their work, they sometimes innovate different designs, and try to excel others in the locality in order to earn reputation in the market, or from their friends. Often they follow the performance of reputed fellow entrepreneurs in order to earn distinction in the craft. The entrepreneurs have enjoyed good profit ratio due to the advantage of being adjacent to a religious site and geographical proximity to a historical place. Because of this, they try to run their independent work around their home and supply the nearby market close to places of worship. The two least important items from bottom are Desire to dominate and influence others and Desire to do something new apart from stereotyped job. This reflects the view that in the cluster there exists a web of cooperation among the enterprise owners even in a competitive scenario. Further the entrepreneurs are not much interested to leave their traditional craft which is their natural adoption.

Table 5.8: Mean Value and % of Respondents with High Value of Motivation, Nabadwip

Motivation Item	% of entrepreneurship with high motivation value greater than or equal to mean	% of entrepreneurship with high motivation value less than mean	Mean	Rank
Aspiration for doing independent work	30.0	70.0	4.1	17
Deontic motive	78.3	21.7	4.0	16
Earning satisfaction from one's own work	76.7	23.3	3.9	13.5
Earning respect in the eyes of the society /fellow producers	81.7	18.3	3.9	13.5
Emulating successful fellow entrepreneurs	80.0	20.0	3.9	13.5
Respect from friends	80.0	20.0	3.9	13.5
Larger personal income	76.7	23.3	3.8	9.5
Greater flexibility in personal and family life	71.7	28.3	3.8	9.5
Safety and security motive	76.7	23.3	3.8	9.5
Ambition to excel others through leadership development	55.0	45.0	3.8	9.5
Desire for social interaction through working in a group	71.7	28.3	3.7	6
Build business for future generation	66.7	33.3	3.7	6
Facing challenges in life	63.3	36.7	3.7	6
Continuing a family tradition	55.0	45.0	3.6	3.5
Desire to introduce novelty in work	60.0	40.0	3.6	3.5
Desire to do something new apart from stereotyped job	43.3	56.7	3.3	2
Desire to dominate and influence others	40.0	60.0	3.2	1

Source: Author Calculation based on Field Survey on 2017

Reliability of the internal consistency of the motivation items is reflected by the value of the Cronbach's alpha coefficient (0.705) which is a very moderate one. Here it is revealed that if item i, viii, ix, xiv and xvi are deleted, the value of the coefficient increases by some marginal amount. On the other hand, with elimination of other variables, the value falls. Hence these values are supposed to behave in a more internally consistent way.

Table 5.9: Item-Total Statistics, Nabadwip

Item No	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
(i)	59.68	29.406	.126	.708
(ii)	59.72	26.647	.403	.679
(iii)	59.40	26.075	.576	.662
(iv)	59.58	25.942	.488	.668
(v)	59.68	25.915	.502	.667
(vi)	59.57	26.419	.466	.672
(vii)	60.25	26.360	.437	.675
(viii)	59.95	31.743	-.157	.744
(ix)	59.67	30.158	.085	.708
(x)	59.85	27.858	.320	.689
(xi)	59.87	28.863	.250	.696
(xii)	59.63	28.270	.404	.685
(xiii)	59.77	28.080	.257	.696
(xiv)	59.88	27.834	.181	.710
(xv)	59.80	28.095	.408	.684
(xvi)	59.67	31.718	-.181	.724
(xvii)	60.30	25.536	.443	.672

Source: Author's Calculation based on Field Survey on 2017

5.5.2 Link between motivation index and firm performance level in Nabadwip cluster

Since in most of the cases of the small scale /family based firms in this cluster, the day to day operation is run depending upon the cooperative action of family members, the overall performance of such firms is better judged by the per capita profitability. This reflects upon the intensity of cohesive action and cooperation together with the attitude to excel others in a competitive market. The simple correlation between per capita profit and overall motivation index for the surveyed entrepreneurs is found as 0.374 which is highly significant. It connotes that with higher motivation index values there occurs greater level of involvement of the entrepreneurs in connection with earning higher profit.

For judging the individual impact of motivation items at a disaggregated level, we incorporate all the six sub-indices of motivation as explanatory items together with entrepreneur's per capita profit. The linear form of regression yields the results placed in following table 5.10. It is observed that the coefficient of sub-Index W and sub-index A have expected positive sign which are however not significant. While Sub-Index C is significant at 1% level with expected positive value of its coefficient. Two other sub-indices I and S appear to be positively significant at 10% level. Sub-

index E although significant at 10% level, has however (–)ve sign. The overall regression is observed to be more or less good fit as evident from the value of R^2 which is 0.308 and the F statistic (3.93) being significant at 10 %.

Table 5.10: Results of linear regression, Nabadwip

Independent Variable	Coefficient	t -Value	Significance
(Constant)	7.367***	19.941	.000
Sub-Index W	.140	.520	.605
Sub-Index A	.024	.106	.916
Sub-Index C	.703***	3.512	.001
Sub-Index I	.578*	1.912	.061
Sub-Index S	.884*	1.882	.065
Sub-Index E	-.639*	-1.737	.088
F			3.930*
R^2			.308

Source: Author's Calculation based on Field Survey on 2017
Dependent Variable: LN of Per Capita Monthly Income (LN_PCI)

5.6   Analysis of Motivational Aspects in Howrah Foundry Cluster

5.6.1   Relative importance of motivation items

Most of the firms in the foundry cluster in Howrah region have been operating since many years back (they were set up around 1950). The legacy of running these enterprises have been transferred from past generations to their offsprings who are toiling now to further expand their business. Further these entrepreneurs put great value on independent work where they may enjoy flexibility in their operation and the family business brings the scope before them. These three factors occupy the first three ranks. They are however not much primarily bothered for having respect from friends, dominate others or deriving larger personal income from this pursuit, for which the ground work was in many cases already laid by their predecessors. These were at the lower end of the motivation ranks based on mean values.

Table 5.11: Mean Value and % of Respondents with High Value of Motivation, Howrah

Motivation Item	% of entrepreneurship with high motivation value greater than or equal to mean	% of entrepreneurship with high motivation value less than mean	Mean	Rank
Larger Personal Income	66.7	33.3	3.83	3
Safety and Security Motive	20.0	80.0	4.00	7.5
Aspiration for doing Independent Work	63.3	36.7	4.63	17
Greater flexibility in Personal and Family Life	40.0	60.0	4.27	15
Desire to do something new apart from Stereotyped Job	26.7	73.3	4.10	10.5
Desire to Introduce Novelty in Work	40.0	60.0	4.17	13.5
Earning Satisfaction from own Work	30.0	70.0	4.10	10.5
Facing Challenges in Life	23.3	76.7	4.00	7.5
Earning respect in the eyes of the Society fellow Producers	80.0	20.0	3.93	6
Ambition to excel others through Leadership Development	23.3	76.7	4.07	9
Desire to Dominate and Influence Others	63.3	36.7	3.80	1.5
Desire for Social Interaction through Working Group	66.7	33.3	3.87	4
Deontic Motive	76.7	23.3	3.90	5
Continuing Family Tradition	40.0	60.0	4.17	13.5
Emulating Successful Fellow Entrepreneurs	33.3	66.7	4.13	12
Respect from Friends	70.0	30.0	3.80	1.5
Build Business for Future Generation	50.0	50.0	4.40	16

Source: Author's Calculation based on Field Survey on 2017

Internal consistency of the motivation items as measured by the value of the Cronbach's alpha coefficient in this case appears significant at value of 0.719. Here in table 5.12, it is revealed that if item viii, be deleted, the value of the coefficient increases by very marginal amount. On the other hand, the value declines with removal of other items. Hence the responses to motivation items are supposed to be reasonably reliable.

Table 5.12: Item-Total Statistics, Howrah

Item No	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
(i)	65.33	25.126	.700
(ii)	65.17	24.695	.678
(iii)	64.53	27.844	.715
(iv)	64.90	26.645	.709
(v)	65.07	26.892	.711
(vi)	65.00	27.103	.721
(vii)	65.07	26.616	.710
(viii)	65.17	27.454	.720
(ix)	65.23	24.668	.686
(x)	65.10	26.024	.698
(xi)	65.37	26.240	.716
(xii)	65.30	25.183	.697
(xiii)	65.27	25.857	.694
(xiv)	65.00	30.207	.766
(xv)	65.03	24.447	.679
(xvi)	65.37	23.895	.679
(xvii)	64.77	27.151	.715

Source: Author's Calculation based on Field Survey on 2017

5.6.2 Link between motivation index and firm performance level in Howrah cluster

In this case also the close family bonding of entrepreneurs across generations in the same kind of work imply that the members are intimately linked with the operation either directly or indirectly. Hence the efficiency in performance is likely to be better judged by per capita profitability as explained by the different sub-indices. The results in table 5.13 reveal that only two variables have somewhat significant impact on this profitability figure. While sub-index E appears highly significant, sub-index C (reflecting creativity) is observed to be moderately significant at 15% level. The ranks of items like Desire to do something new apart from Stereotyped Job (10.5) and Desire to Introduce Novelty in Work (13.5) that combine to produce subindex C, also support the result. The correlation coefficient between per capita profitability figures and overall motivation index is computed as .386 that appears as significant at 5 % level.

Table 5.13: Results of Linear Regression, Howrah

Independent Variable	Coefficient	t -Value	Significance
(Constant)	8.530	39.129	.000
Sub-Index W	.178	.603	.552
Sub-Index A	.110	.760	.455
Sub-Index C	.257	1.514	.144
Sub-Index I	-.279	-.997	.329
Sub-Index S	-.158	-.469	.644
Sub-Index E	.897	2.444	.023
F			2.573**
R^2			0.402

Source: Author's Calculation based on Field Survey on 2017

Note: ** indicate 5 per cent level of Significance

5.7 Motivational Issues in Shovabazar Hosiery Cluster

5.7.1 Relative importance of motivation items

The pioneering efforts in establishing hosiery firms in Shovabazar area have been put by Bengalee entrepreneurs since many years back. At present however their efforts in this regard has been supplanted by non-Bengalee enterprise owners. The present enterprise owners dominated by the non-Bengalee sect, seem to be mostly motivated by greater flexibility in personal life, continuing their family tradition and aspiration for doing independent work, as evinced in the ranks of these items in table 5.14. Maintenance of familial legacy and yearning to enjoy independence in the job appear to be major driving force behind their work. These are followed by Desire to do something new apart from Stereotyped Job, Desire to Introduce Novelty in Work and Earning Satisfaction from own Work. The least important items as per the ranks, appear to be the deontic motive, Build Business for Future Generation and Desire to Dominate and Influence Others. Due to lack of appropriate and necessary technology, the Bengalee entrepreneurs are facing hurdles in promoting their business, Hence they are not much interested to entice future generation in this business, On the other hand, the non-Bengalee entrepreneurs do not pin much stress on this factor, as in their sect, the offsprings usually follow their hereditary occupation. Entrepreneurs here are usually driven by their own urge to succeed in their business oriented efforts and the competitive urge to dominate others seems to have taken a back seat.

Table 5.14: Mean Value and % of Respondents with High Value of Motivation, Shovabazar

Motivation Item	% of entrepreneurship with high motivation value greater than or equal to mean	% of entrepreneurship with high motivation value less than mean	Mean	Rank
Larger Personal Income	23.3	76.7	4.23	8
Safety and Security Motive	30.0	70.0	4.23	8
Aspiration for doing Independent Work	66.7	33.3	4.57	15
Greater flexibility in Personal and Family Life	86.7	13.3	4.80	17
Desiretodosomethingnewapart from Stereotyped Job	56.7	43.3	4.50	14
cDesireto Introduce Noveltyin Work	50.0	50.0	4.43	13
Earning Satisfaction from own Work	36.7	63.3	4.30	12
Facing Challenges in Life	36.7	63.3	4.27	10.5
Earningrespectintheeyesofthe Society fellow Producers	26.7	73.3	4.27	10.5
Ambitiontoexcelothersthrough Leadership Development	26.7	73.3	4.13	4.5
Desire to Dominate and Influence Others	23.3	76.7	4.07	3
Desirefor Social Interactionthrough Working Group	30.0	70.0	4.13	4.5
Deontic Motive	36.7	63.3	3.47	1
Continuing Family Tradition	73.3	26.7	4.73	16
Emulating Successful Fellow Entrepreneurs	26.7	73.3	4.23	8
Respect from Friends	23.3	76.7	4.17	6
Build Business for Future Generation	60.0	40.0	3.90	2

Source: Author's Calculation based on Field Survey on 2018

In case of six items here are more than 50% of entrepreneurs having motivation value greater than or equal to mean. In eleven cases there exist more than 50% of entrepreneurs having high motivation value less than mean. The motivational items seem to be fairly internally consistent as indicated by the Cronbach's alpha coefficient (0.705). Interestingly as depicted in table 5.15, if items (xiv), (xvi) and (xvii) be deleted, the Cronbach's coefficient value either rises or remains the same.

Table 5.15: Item-Total Statistics, Shovabazar

Item No	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
(i)	68.2000	17.614	.702
(ii)	68.2000	17.131	.700
(iii)	67.8667	16.533	.696
(iv)	67.6333	16.102	.675
(v)	67.9333	15.513	.667
(vi)	68.0000	15.379	.663
(vii)	68.1333	16.602	.690
(viii)	68.1667	16.557	.693
(ix)	68.1667	17.316	.696
(x)	68.3000	16.010	.679
(xi)	68.3667	16.309	.687
(xii)	68.3000	16.493	.695
(xiii)	68.9667	16.930	.704
(xiv)	67.7000	18.217	.715
(xv)	68.2000	16.028	.670
(xvi)	68.2667	17.513	.705
(xvii)	68.5333	16.878	.719

Source: Author's Calculation based on Field Survey on 2018

5.7.2 Link between motivation index and firm performance level in Shovabazar cluster

As mentioned earlier, continuous strike for 70 days in 1978 and again for five months in 1984 have unsettled the backbone of many of the Bengalee entrepreneurs some of whom even suffered a loss. But despite that till now they are continuing with their business and earning profit although at a lower rate compared to their non–Bengalee counterparts who through their business acumen have been able to survive the adverse phase in the business arising from labour strike and their non-cooperation. The performance of the hosiery enterprises as a whole in the survey area as measured by per capita profitability has been insignificantly correlated (0.026) with overall motivation index. This mismatch can be attributed to the uncontrolled labour input behavior in the industrial arena for several months in the past which is still having some cascading adverse impact on the performance of a segment of the entrepreneurs despite no dearth in their motivation. In terms of overall regression of per capita profit on sub-indices, it

Table 5.16: Results of Linear Regression, Shovabazar

Independent Variable	Coefficient	t -Value	Significance
(Constant)	9.583189	18.436	.000
Sub-Index W	1.296	1.877	.073
Sub-Index A	-.413	-.928	.363
Sub-Index C	-.678	-1.487	.151
Sub-Index I	-.215	-.351	.729
Sub-Index S	1.348	2.342	.028
Sub-Index E	.179	.227	.823
F			1.838 (.136)
R^2			.324

Source: Author's Calculation based on Field Survey on 2018

is observed that only sub-index W and sub-index S have some significant impact on variation on profitability figures. However R^2 is on the lower side and F statistic is found to be moderately significant (at 15% level). Hence in this case the relation between motivation and profitability is a observed to be a bit flimsy. The units in the cluster often suffer from inadequacy of skilled labour. A section of the entrepreneurs operating on local basis is not finding proper motivation because of problem of inadequate advertisement, financial problem, lack of innovative thought in business etc. The current generation in Non- Bengalee owners having completed high academic degree like MBA, accountancy etc has been joining in family business and they often adopt automation, new business thoughts etc to run the business successfully. While among Bengalees , the new generation find it problematic to run the business arising from lack of advertisement, inadequate investment of resources in education and lack of farsight in undertaking automation.

5.7.3 Remarks

This section focuses on some interesting results that appear overtly endemic in almost all the clusters surveyed for study. This has implication both for management of small and medium-sized enterprises as well as their operational performance. On the basis of observing the importance attached to respective motivation items in the firms over the five clusters, it came out that some motivation components are assigned higher weightage in majority of the clusters. These have been identified as earning satisfaction from independent work, aspiration for doing independent work, enjoy greater flexibility in personal life, maintaining family legacy as well earning respectable income.

As per the evidence, the motivation that encourages entrepreneurs to start up new business or continue family legacy, their commitment with the idea of achieving success by doing independent work by facing challenges in life along with their passion for the process, are key in the start up of the new ventures. In this context the obtained results coincide with two needs as emphasized by McClellan which appear as most significantly common : enjoy independence and attain satisfaction with power.

Apart from motivation the relation that the enterprise owners develop with the stake holders in the course of their productive operation, has also a great bearing on their performance level.

Chapter Six

Focus on Relational Capital and Firm Performance

6.1   Introduction

Apart from profitability, one of the important motives of entrepreneurial firms is to sustain their business performance in the market economy and survive the spirits of competition, whether perfect or imperfect. This emphasizes the need for continuity or possible expansion in the scale of production, retaining and attracting labour and undertaking investment for maintaining the tempo of expansion, and maintaining price stability through timely supply of quality products. In this context, it cannot be gainsaid that for the flourishing of business, the firms need to maintain a cordial relation with all the stakeholders who may be directly or indirectly linked with its process of production and disposal of final output. Dealing with the stakeholders in an efficient way helps generate strong bond or relationship which usually proves very effective for the firm to improve the quality of its product, market its output and/or lower the prices in order to remain competitive in the market. According to Okafor (2012), apart from finance and physical capital, relational capital includes some form of intangible asset available to a firm arising from its relationship with stakeholder environment, that might add value to the firm. She emphasizes that internal and external networks of the entrepreneur are supposed to give shape to a major part of a firm's relational capital. Siddiqui et al (2014) argue that relational capital represents a part of a firm's market value that is attributable to its status of business relationship which can serve as a growth strategy. According to Carlucci et al (2004), increased investment in relationships with internal and external stakeholder groups usually have multiple effects in the production network for improving performance. Internal source of relational capital refers to informal bonding with members of the family, relation with business partners or the labourers who deal with inputs. While external networks in the form of linkages with customers and suppliers, informal relation with firms in a cluster and mutual trust or

coordination of their efforts, linkages with external bodies such as local /state Govt., location of the firm as well as reputation or goodwill of the firm-all constitute the external source of relational capital. It is usually held that for new or young firms/entrepreneurs, it is rather difficult to develop a smooth relationship with its environment that might be conducive to its further development. Again, because of lack of earlier experience they often get late in realizing the importance of relational capital for their future growth prospects. This is also supported by Andriessen (2004), when he states that not all businesses can set up relation with their environment and this is mostly the case for newer business ventures which do not have any history and so cannot recognize and manage the relational assets. On the other hand, established firms / entrepreneurs, do not usually falter in comprehending the strength of relational capital due to their long experience in business dealings. In the context of an industrial cluster however, the relatively new firms because of close proximity and coordination with established older firms, are likely to realise early the importance of relational capital. For successful handling of relational capital, firms should recognize that it is a very important component of intangible asset apart from financial and physical assets. This is in coherence with the view of Cuganesan (2006) when he states that sophisticated customers and importance of innovation have shifted the bases of competition for many business firms away from traditional physical and financial assets towards managing relational capital. In order to assess the importance of relational capital in business success, especially in case of clustered firms, we try to analyse the possible differential in their level of relational capital and its impact on firm performance. However in order to understand the standing of relational capital as an intangible asset, it is deemed important to analyse in some detail the components of intangible asset.

6.2   Relational capital as a form of intangible asset

Like that of physical and financial capital, intangible capital is no less important in enhancing firm performance. Recently focus of organizations has shifted more on intangible assets when seeking, for competitive advantages and less on material assets (Bontis, 1996; Martín de Castro et al., 2004). Firms have become increasingly aware of the role of intangible asset in the era of environmental norms regarding use of physical capital and financial uncertainties and should focus on issues of relational capital as an adjunct of intellectual capital. Intangible assets are basically founded on information sharing, reciprocation of knowledge and business relationship and bonding with all stakeholder groups, and hence these assets are difficult to detect, imitate, replicate and to transfer in the markets (Martín de Castro, López & Navas, 2004). This intangible asset is broadly manifest in the form of intellectual capital. Several authors declare that firms with an adequate intellectual capital have a better chance of survival (Hormiga et al., 2011). According to Edvinsson and Malone (1997), intellectual capital covers the relationship between customers and associates.

Sullivan (1999) defines intellectual capital as the knowledge that can be converted into profit in the future and it derives from ideas, inventions, innovations, technologies, designs and techniques. There are arguments by some that intellectual capital should be computed by the difference between accounting value of a firm and its market value. Extending the definition of Edvinsson and Malone, intellectual capital can broadly be identified with relational capital and it is viewed in terms of three layers. The first stresses the importance of networks, collaborations and associations in knowledge spillover and sharing, The second emphasizes the relationships with customers, input suppliers, business partners and all stakeholder groups both internal and external, and the third refers to mutual bonding based on trust and reputation. Relational capital facilitates the firms in obtaining information and knowledge from external environment and helps translate that knowledge into improving its own technique. It is composed of both formal and informal relationships, and can be instrumental to a firm's success (Westlund, 2003; Hormiga et al., 2010). Further Costabile (2001) views relationship capital as the sum total of stock of trust, reputation and brand loyalty that is possessed by a firm. It is now

widely recognized that firms should put in efforts to improve the above aspects to gain competitive advantage over time (Putnam, 1995; Pirovano and Gilodi 2003; Granovetter, 1973).

It should be noted that in terms of the literature of knowledge based view of the firm, there has been an evolution in usage of terms associated with intellectual capital. While initially firms were in favour of the use of the notion of customer capital, later on the focus shifted to relational and subsequently its variant as social capital. Customer capital refers to the knowledge entrenched in marketing system and relationship developed by a firm in the process of business (Bontis, 1999). In this notion, great stress is put on developing customer relationship which is captured by indicators like the number of relationships, their duration and role in value creating process and value appreciation. Later on firms replaced this term with the notion of relational capital. It connotes a broader dimension and captures not only customer relationship but also valued relationships with other stakeholders like Govt., partners in business, input suppliers, other strategic alliances like research institutes, knowledge sharing conduits, and other external networks associated with enhancing the product value of organization. Now- a- days it has been common place in some spheres to use the concept of social capital by extending the connotation of relational capital. According to Putnam (1993) social capital is defined as social networks, norms and trusting relationships that facilitate actions and cooperation of persons in an organization for mutual benefit. Bourdieu and Wacquant (1992) explain the notion of social capital as 'the sum of the resources, actual or virtual that accrue to an individual or group by virtue of possessing a durable network of institutionalized relationships of mutual acquaintance and recognition'. Some researchers (Adler and Kwon, 2002) identify it with the goodwill available to individual firm or groups while some (Fukuyama, 1995) consider it as the set of values and informal rules shared by firms in a cluster that enable them to cooperate among themselves. Thus social capital encompasses individual relationship and it facilitates the creation of intellectual capital that can broadly be extended to capture relational capital, which focuses on shared knowledge or vision across firms, relation with different stakeholders and social bonding based on trust and reputation. There are assumed to be individual items or variables that fit into either of these three categories of relational capital.

In developing countries, especially in case of clustered small and medium scale firms, there usually exists a high degree of relational capital as identified by Welbourne (2008). It is supposed to be very effective in flourishing the scale of firm operation since there is likely to arise strategic advantage of networks and information flow across firms, collaborations between input suppliers and entrepreneurial firms, or across the entrepreneurial firm and its customer or client firms. In this context it seems imperative (a) to develop an index of relational capital in case of some small scale clustered firms in India and find the degree of correlation of this index with that of firm performance level (b) test the reliability of the relational capital items and (c) analyse the impact of individual relational capital items/variables on the firm performance pattern.

6.3   Components of relational capital and relevant Hypotheses

Sharing of technological knowledge: Mutual interactions across stakeholder groups improve the relational capital of firms in the form of increased scope of knowledge exchange, information flow and enhanced know how. This amounts to better value addition for the firm in the eyes of related parties. Mutual flow of knowledge and information and enhanced imitation possibilities are likely to lead to better quality product and marketing arrangements that may be reflected in better profitability.

Relation with customers: In the era of increasing globalization of business environments, customer relation constitutes an important form of external intangible asset for an organization. Links and feedback from customers enables the understanding of market trends, customer choice and possible price movement. Relationship with customers can lead to better accumulation of value for a firm in terms of strategic information gain and possibility of having access to new set of customers (Greve and Salaff, 2003). In present day world customers are like sovereigns whose tastes, emotions, behaviours and attitudes have a sound impact on the orientation of firm performance. Hence maintaining good customer capital is likely to be directly linked to firm performance indexed by profitability.

Relation with input suppliers: Relational capital also involves supply chain relationship in the form of uninterrupted flow of inputs with maintained quality.

This is ingrained in the social structure and interaction with the relevant parties through which inputs are accessed. Sometimes survey undertaken by firms regarding satisfaction of suppliers from whom products/services are purchased, reflect upon the concern of firms to maintain good relation with them for continued support in future. It is very likely that this kind of external capital has a role in shaping performance of firms.

Informal relation with firms in cluster: Congenial informal relation and absence of non-market rivalry across firms in a cluster generate emotional support, peaceful production environment and an ambience of cooperation and competition. This constitutes an intangible asset and enhances productive zeal of an entrepreneur that is supposed to be conducive to better firm performance.

Linkage with external bodies: Firms often have links with various agencies inside and outside the country. Thus they may have connections with Govt. bodies, credit institutions, importing organizing outside the country, transport agencies, motivating persons in the locality etc. This helps in acquiring valuable information, knowledge, credit, better access to marketing channels or strategic information about the market environment, All these are supposed to have direct impact on firm performance.

Location: Location of a firm in an area linked with better transport connections, high density of population and so potential customers, easy access to skilled labour and raw materials as well as availability of large work space with no political turmoil, generate certain advantages that are conducive to better profitability.

Reputation: Dealing with all stakeholder groups in an affable manner creates a virtuous image for an entrepreneurial firm and this is identified with reputation. A good reputation can help in obtaining new customers, winning the credence of existing customers, gaining access to credit, raw material and other resources that would not be available without good reputation (Shane and Cable, 2002). It also leads to enhanced customer assurance about quality and durability of product. Hence a reputed firm is supposed to have comparative advantage with regard to production, distribution and marketing prospects and this provides opportunity for better survival and profitability.

Trust and good faith relationship: Reputation of a firm helps build links based on trust and mutual faith. It enhances the trust among input suppliers, customers, retailers, credit agencies and leads to quick and efficient exchange of information, acquire fast production order from unsuspecting groups, and helps building better marketing channels. This is supposed to have a direct impact on profitability.

6.4   Analysis of a Cluster of Fish Hook Firms in Barjora

6.4.1 Data and Method

For purpose of study, data were collected from all the clustered firms producing fish hooks in Barjora region of Bankura district in the state of West Bengal in India. The site is about 150 km far away from its main market at Kolkata. Since only 16 firms were located in the cluster, all of them were covered in the study on the basis of face to face interview with the owner of the firms, based on a pre-structured questionnaire. The owners were favoured as respondents to the questions, since they shouldered the day to day management responsibility and actively participated in overall decision making process.

Preparing an overall index of relational capital on the basis of principal component method requires the consideration of diverse individual indicators of relational capital. The overall   index is considered as a latent or unobserved variable. Here the problem is the weight assignment to the individual indicators which is critical to maximize the information from a data set included in an index. A good composite index should comprise important information from all the indicators, but not strongly biased towards one or more of these indicators. Here it needs to be stressed that the individual indicators of relational capital are measured in terms of 5-point likert type scaling ranging from 1= extremely unfavourable to 5= extremely favourable.

We consider the overall index of relational capital linearly determined by eight relevant components. The indicators are sharing of technological knowledge, relations with customers, relations with suppliers of inputs, informal relations with firms in the cluster, linkage with external bodies, locational advantage, trust and good faith relationship as well as reputation. These are denoted as X_{1i}, X_{2i}, X_{3i}, X_{4i},

X_{5i}, X_{6i}, X_{7i} and X_{8i} respectively. In latent form the relational capital index can be expressed as

$$R_i = \delta_1 X_{1i} + \delta_2 X_{2i} + \delta_3 X_{3i} + \delta_4 X_{4i} + \delta_5 X_{5i} + \delta_6 X_{6i} + \delta_7 X_{7i} + \delta_8 X_{8i} + w_i$$

(Where i = 1 to 16)

We denote λ_j (j= 1, 2, 3, 4, 5, 6, 7, 8) as the jth Eigen value. Subscript j refers to the number of Principal Components that also coincides with the number of corresponding indicators. Noting that the values of λ_j gradually falls as the suffix increases, we denote P_j (j = 1, 2......7, 8) as the jth Principal Component. We get the corresponding relational capital index according to the following weighted average:

$$D_i = \frac{\sum_{j=1}^{8} \lambda_j P_j}{\sum_{j=1}^{8} \lambda_j}$$

Although usually the whole set of causal variables is replaced by a few principal components, which account for a substantial percentage of the total variation in all the sample variables, here we consider as many components as the number of explanatory variables. This is due to our concern in order to avoid discarding information that could affect the estimates. Thus this procedure accounts for 100 percent of the total variation in the data.

Cronbach's alpha is used to assess the reliability or internal consistency of the set of individual relational capital indicators.

It is computed by correlating the score for each item with the total score for each observation and then comparing that to the variance for all individual indicator scores.

Where $a = \left(\frac{k}{k-1}\right)\left(1 - \sum \sigma_{yi}^2 / \sigma_x^2\right)$

Where k refers to the number of relational capital items

σ_{yi}^2 indicates to the variance associated with indicator / item i

σ_x^2 implies the variance associated with the observed total scores.

In order to explain the variation in firm performance level, we consider only a subset of individual indicators of relational capital as explanatory variables. For instance only 6 indicators are considered and these are technological knowledge sharing, relation with customers, relationship with input suppliers, informal relation with firms in cluster, location and mutual trust.

The following multiple regression is set to assess the impact of these individual indicators on firm performance level,

$$\text{Ln } Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_6 X_6 + \beta_7 X_7$$

Where Ln Y= Log value of per-capita profitability, X_1 = Technological knowledge sharing, X_2 = Relation with customers, X_3 = Relationship with input suppliers, X_4 = Informal relation with firms in cluster, X_6 = Location, X_7 = Trust and good faith relation.

Two variables 'linkage with external bodies' and 'reputation' are left here as in the surveyed region, these were not given much importance by the respondents and further consideration of too many variables might affect the degree of freedom in the estimation process.

6.4.2 Empirical Results and Discussion

Principal component method has been applied to derive the relational capital index for sixteen entrepreneurs based on eight relational capital items. For this purpose all the possible eight principal components have been used in order to fully utilize the available data and not to leave any information wasted. The following table 1 provides the values of coefficients linked with the eight items of normalized values of relational capital for each of eight principal components. The corresponding Eigen values are tabulated at the bottom of the table.

Table 6.1: Coefficients and Eigen values based on normalized value of relational capital items, Barjora

Relational Capital item	Coefficients							
	PC 1	**PC 2**	**PC 3**	**PC 4**	**PC 5**	**PC 6**	**PC 7**	**PC 8**
X1	0.46532	0.220757	0.217878	0.097702	-0.38257	0.067913	-0.06857	-0.72253
X2	0.371064	-0.03057	-0.00466	-0.6274	-0.46465	-0.34821	-0.03317	0.359827
X3	0.298633	-0.56096	-0.18459	-0.15973	-0.0394	0.702924	0.201905	0.011437
X4	0.212253	-0.20769	0.799517	0.329883	-0.00955	0.057592	-0.12301	0.381081
X5	0.300825	0.332572	0.259514	-0.43699	0.683161	0.07289	0.253802	-0.06445
X6	0.428136	-0.09128	-0.25133	0.453968	0.066801	-0.39057	0.609419	0.103516
X7	0.201152	0.667169	-0.22209	0.220185	-0.1688	0.441958	-0.0689	0.433649
X8	0.444181	-0.16871	-0.31524	0.130201	0.36937	-0.15342	-0.70551	0.014022
Eigen value								
	3..335738	1.496308	1.042452	0.907151	0.589344	0.332971	0.184919	0.111119

Source: Author Calculation based on Field Survey on 2016

The corresponding relational capital index values for sixteen entrepreneurs using the method

$$D_i = \frac{\sum_{j=1}^{8} \lambda_j P_j}{\sum_{j=1}^{8} \lambda_j}$$

are given in column 2 of table 2 while log values of per-capita profits are tabulated in column 4. It is found that there exists highly significant correlation between these two series. The correlation coefficient is 0.743 which is significant at 1% level (p value being 0.001). Further if we regress the log values of per-capita profit on relational capital index, the coefficient is found to positive as expected. Its value is found to be 0.745123, the corresponding F value being 17.20982 and it is also significant at 1% level.

Table 6.2: Relational capital index and profitability values, Barjora

Individual	Normalized Relational Capital index	Per-Capita Profitability values	Log Per-Capita Profitability values
1	0	500	2.69897
2	0.53267	1137	3.05576
3	0.7016	1461	3.16465
4	0.24047	1600	3.20412
5	1.04117	4000	3.60206
6	0.07033	1080	3.033424
7	0.54992	1200	3.079181
8	0.5438	1080	3.033424
9	0.44487	1667	3.221936

10	0.64026	4200	3.623249
11	0.33136	800	2.90309
12	0.25031	625	2.79588
13	0.38203	1180	3.071882
14	0.39841	1630	3.212188
15	0.24923	1500	3.176091
16	0.69632	3500	3.544068

Source: Author Calculation based on Field Survey on 2016

The reliability of the instrument used for measuring relational capital indicators is provided by the Cronbach's alpha coefficient which reflects the level of internal consistency of the indicators. Alpha coefficient value ranges from 0 to 1 and proves useful in describing the reliability of factors extracted from multi-point formatted questionnaires or scales (i.e., rating scale: 1= most unfavourable, 5= most favourable). Higher value of the score indicates better reliability level. According to Nunnaly (1978), 0.7 can be considered as an acceptable reliability coefficient. However in specific cases lower thresholds are not uncommon in the literature. In the present case the value of alpha, based on eight relational items, emerges as 0.761 which is indicative of reasonably good reliability of the instrument used for measuring relational capital indicators. However alpha if some item is deleted, as depicted in table-3 is also an important element in this context. It is representative of Cronbach's alpha reliability coefficient for internal consistency if some individual item is removed from the scale. Thus as shown in table-3, if item 4 or 7 were removed the reliability of instrument used for firms' relational capital would somewhat rise in terms of value 0.772 in either of the cases. However there is only marginal change if item 3 or 5 is deleted while their presence can reflect on some important dimension of intangible capital. Other variables are important as their omission decrease the value of the alpha coefficient.

Table 6.3: Item-Total Statistics, Barjora

Variable	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Cronbach's Alpha if Item Deleted
Sharing of knowledge	25.0625	8.329	0.679
Relation with customers	24.0000	9.200	0724
Relation with input suppliers	23.6875	9.696	0.756
Informal relation with firms in cluster	24.1875	9.896	0.772
Linkage with external bodies	24.1875	8.296	0.752
Location	24.0000	8.933	0.711
Trust and good faith relationship	24.1875	10.296	0.772
Reputation	24.0625	8.729	0.702

Source: Author's Calculation based on Field Survey on 2016

The regression equation is fit to assess the impact of the chosen components of relational capital on the firm performance level measured in terms of profitability. The results of regression equation are given in table-4. It is observed that the sign of the coefficient of variable 'Relation with input suppliers' is expectedly positive, its value being 0.098 and it makes significant impact on the variation of log value of profitability. This is indicated by its t value and level of significance (t=2.015689, p<.10). Similarly sign of coefficient of the variable 'Informal relation with firms in cluster' is also in the desired positive direction, with a value of 0.215530and it is also significant (t=4.268078, p<.01). Again there is expected positive sign associated with the variable, 'location', and it is also reasonably significant (t=3.326115, p< .01). However, the sign of the coefficients of the variables 'sharing of knowledge' and that of 'trust and good faith relationship' though found to be positive as expected, are insignificant. Again the sign of the coefficient of the variable 'relation with input suppliers' is found to be unexpectedly negative which is however insignificant. The overall regression as depicted in table 4, is found to be good fit with R^2 value as 0.915029, and F value being 16.15310 which is significant at 1% level. The value of D-W statistic implies that the regression results are non-spurious.

Table 6.4: Regression results of firm performance, Barjora

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Sharing of Knowledge	0.013181	0.091854	0.143501	0.8891
Relation with Customers	-0.006939	0.060682	-0.114356	0.9115
Relation with input Suppliers	0.098503	0.048868	2.015689	0.0746
Informal relation with firms in the Clusters	0.215530	0.050498	4.268078	0.0021
Location	0.184000	0.055320	3.326115	0.0089
Trust and Good faith relationship	0.024601	0.065776	0.374013	0.7171
C	1.262321	0.366831	3.441152	0.0074
Results of Goodness of Fit				
R-squared	0.915029	**Mean dependent var**		3.151248
Adjusted R-squared	0.858382	**S.D. dependent var**		0.262479
F-statistic	16.15310	**Durbin-Watson stat**		1.538027
Prob(F-statistic)	0.000235			

Source: Author's Calculation based on Field Survey on 2016

6.4.3 Remarks

In terms of the above analysis it is found that there is reasonably good internal consistency of relational capital indicators. Further it is important to note that if either of the indicators like 'informal relation with firms in cluster' or 'trust and good faith relation' are deleted, the value of Cronbach's alpha increases. This implies the relative lack of consistency of these two indicators with that of others. This result is further corroborated by the results of regression equation where it is found that the coefficient of the aforesaid two indicators are relatively insignificant. This finding can be explained by the fact that in the concerned cluster there is undercurrent of mutual rivalry and competition across the firms. The lurking desire across the firms to capture a bigger size of the total market and undercut their co-producers in the locality seem to be reflected in a non-cohesive (with other indicators of relational capital) impact on the informal relation of firms in the locality. Further this type of attitude among the entrepreneurs reinforces sort of poor trust and flexible bonding, stronger version of which are often required to generate a relational capital atmosphere conducive to sustained vibrant growth in the region. However the responses about informal relations with other firms in the cluster have a competitive edge which is reflected in a significant impact on per capita profitability outcome. Again, the location of the rural level enterprises at a region well connected with /beside the main road, helps develop potential market and has significant impact on the profitability situation of the enterprises. For uninterrupted production process firms realise the importance in maintaining good relation with input suppliers and this results in significant impact on firm performance level. The value accrued in terms of relating with input suppliers is felt when there is favourable dealing in terms of cost of material purchased, the installment of payment and/or rebates in bulk purchase. The firms were however not found much keen in sharing of knowledge, market facility, packaging, tempering or channeling of expertise to others, that helps mutual survival of firm performance and its value addition. Maintaining customer repeat rates, stable prices along with good product quality as well as uninterrupted supply of output are some of the factors that contribute to the fostering of good relation with customers. Unfortunately this factor is neither found to be on the positive note nor significant in the study region. The customers are located at distant market place at Kolkata and hence they hardly have day to-day interaction with them. The analysis yields concrete suggestion regarding

identifying areas of relational capital which, if managed and nurtured efficiently and deftly, can make substantial contribution to the performance of firms. However there are areas which need to be looked into for generating stronger bonds of trust and harmony in the informal relation of the firms in the locality, sharing knowledge with fellow firms as well as maintaining relation with customers located afar. In the past the business in the region was managed and organized by a cooperative based on coordinated action of the entrepreneurs. However, later on, lack of adequate trust and informal coordinative relation across the entrepreneurs led to the disappearance of the cooperative and each entrepreneur began to do their business on the basis of individualistic spirit. This has sapped the spirit of inter-firm coordination and cooperation which is one of the important dimensions of cluster based business behavior. On the whole, the results indicate that there need to be substantial consistency in the relational capital items and significant positive contribution of each item towards firm level performance for a vibrant growing cluster of entrepreneurial firms.

6.5   Analysis of a Cluster of Bell-metal Enterprises in Dharmoda:

6.5.1   Data and Method

The data were collected from the clustered firms producing bell metal items in Dharmada region of Nadia district in the state of West Bengal in India. A sample of 60 firms were covered in the study on the basis of face to face interview with the owner of the firms, based on a pre-structured questionnaire. The owners were favoured as respondents to the questions, since they shouldered the day to day management responsibility and actively participated in overall decision making process.

The relational capital index for the bell-metal firms in Dharmoda has been derived on the basis of application of the principal component method outlined above. Cronbach's alpha is used to assess the reliability or internal consistency of the set of individual relational capital indicators.

The following multiple regression is set to assess the impact of the individual indicators on firm performance level,

$$LnY = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8$$

Where X_1 = technological knowledge sharing, X_2 = relation with customers, X_3 = relationship with input suppliers, X_4 = informal relation with firms in cluster, X_5 = Linkage with external bodies, X_6 = location, X_7 = trust and good faith relation, X_8 = Reputation and LnY refers to log value of per capita profit in the enterprise.

6.5.2   Empirical Results and Discussion

Principal component method has been applied to derive the relational capital index for sixty entrepreneurs based on eight relational capital items. For this purpose all the possible eight principal components have been used in order to fully utilize the available data and not to leave any information wasted. The following table 6.5 provides the values of coefficients linked with the eight items of normalized values of relational capital for each of eight principal components. The corresponding Eigen values are tabulated at the bottom of the table.

Table 6.5: Coefficients and Eigen Values Based on Normalized Value of Relational Capital Items, Dharmoda

Relational Capital Item	Coefficients							
	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8
X1	0.371416	0.01194	0.057849	-0.30994	0.799616	-0.17476	-0.29863	0.058281
X2	0.473534	-0.35103	-0.14192	0.079903	-0.05099	-0.02055	0.1905	-0.76597
X3	0.441702	-0.348	-0.0751	0.141028	-0.06287	-0.27069	0.480141	0.592037
X4	0.304974	0.516903	0.267075	-0.26517	-0.4052	-0.56851	-0.04373	-0.09415
X5	0.044526	-0.17714	0.939027	0.229857	0.059206	0.156681	0.051325	-0.03667
X6	0.268171	0.674638	-0.06898	0.34552	0.23448	0.369711	0.395817	-0.02165
X7	0.382081	0.000614	-0.10644	0.536943	-0.21265	0.084802	-0.69213	0.151403
X8	0.360308	-0.04276	0.041054	-0.58892	-0.29355	0.635721	-0.06111	0.160594
	Eigen value							
	2.953575	1.03256	1.017932	0.843751	0.683888	0.623917	0.568405	0.275973

Source: Author Calculation based on Field Survey on 2016

The corresponding relational capital index values for sixty entrepreneurs are computed by using the method

$$D_i = \frac{\sum_{j=1}^{8} \lambda_j P_j}{\sum_{j=1}^{8} \lambda_j}$$

Further log values of per capita profitability of the enterprise families are also calculated. It is found that there exists highly significant correlation between these

two series. The correlation coefficient is 0.765 which is significant at 1% level (p value being 0.00), Further if we regress the log values of profit on relational capital index, the coefficient is found to significantly positive as expected.

The reliability of the instrument used for measuring relational capital indicators is provided by the Cronbach alpha coefficient which reflects the level of internal consistency of the indicators. Alpha coefficient value ranges from 0 to 1 and proves useful in describing the reliability of factors extracted from multi-point formatted questionnaires or scales (i.e., rating scale: 1 = most unfavourable, 5 = most favourable). Higher value of the score indicates better reliability level. According to Nunnaly (1978), 0.7 can be considered as an acceptable reliability coefficient. However in specific cases lower thresholds are not uncommon in the literature. In the present case the value of alpha, based on eight relational items, emerges as 0.715 which is indicative of reasonably good reliability of the instrument used for measuring relational capital indicators. However alpha if some item is deleted, as depicted in table-2 is also an important element in this context. It is representative of Cronbach's alpha reliability coefficient for internal consistency if some individual item is removed from the scale. Thus as shown in table -2, if item 5 (**Linkage with external bodies**) were removed the reliability of instrument used for firms' relational capital would somewhat rise in terms of value 0.751. Other variables are important as their omission decrease the value of the alpha coefficient.

Table 6.6: Item-Total Statistics, Dharmoda

Relational Capital Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sharing of technology knowledge	27.6667	8.395	.467	.677
Relations with customers	27.5333	9.202	.610	.645
Relations with suppliers of inputs	27.5333	9.711	.562	.660
Informal relations with firms in the cluster	27.5333	9.779	.398	.688
Linkage with external bodies	28.0667	11.555	.051	.751
Location	27.4833	10.220	.325	.703
Trust good faith relationship	27.3667	9.524	.471	.673
Reputation	27.4333	9.945	.447	.679

Source: Author Calculation based on Field Survey on 2016

The following table-6.7 indicates the mean value of the relational capital items, variation in perception level of entrepreneurs regarding relational capital components and the rank of the perceived status of the items. It is observed that as expected in a performing cluster, trust and good faith relationship achieve rank 1, reputation attain rank 2, while location of the cluster of firms is considered in a position of rank 3. Being close to Calcutta the firms do not have to face great problems in marketing their product. The roads being in good condition, the entrepreneurs also have relatively easy access to mahajans. However linkage with external bodies is given least importance in their perception. This is probably because the enterprise owners are mostly linked with respective mahajans with respect to their subcontracting relationship. Hence they hardly have to bother about the conduct and relation of external agencies that might exist. Further the work being mostly of stereotyped fashion, the owners do not attach much importance to it. However sometimes it is found that some long term workers in a particular enterprise leave laboring job and engage in some other enterprise or launch individual enterprise on his own effort or by hiring some labour. This provides some scope of knowledge percolation or sharing.

Table 6.7: Perceived Status of Relational Capital Items, Dharmoda

Relational Capital Variables	Mean	Standard Deviation	Rank of Mean
Sharing of technology knowledge	3.85	1.03	7
Relations with customers	3.98	0.70	4
Relations with suppliers of inputs	3.95	0.62	6
Informal relations with firms in the cluster	3.96	0.76	5
Linkage with external bodies	3.45	0.69	8
Location	4.03	0.73	3
Trust good faith relationship	4.15	0.75	1
Reputation	4.08	0.67	2

Source: Author Calculation based on Field Survey on 2016

The regression equation is fit to assess the impact of the chosen components of relational capital on the firm performance level measured in terms of profitability. The results of regression equation are given in table-6.8. It is observed that the sign of the coefficient of variable 'shared knowledge' is expectedly positive, its value being 0.026 and it makes significant impact on the variation of log value of profitability. This is indicated by its t value and level of significance ($t=2.174$, $p<.05$). Similarly sign of coefficient of the variable 'customer capital' is also in the desired positive direction, with a value of .045, it is also significant ($t=1.846$, $p<.10$). Again there is expected positive sign associated with the variable, 'relation with supplier of inputs', which is however insignificant. The sign of the coefficients of the variables 'Informal relation with other firms' is as expected positive and also significant ($t= 2.573$, $p<.05$). Again the sign of the coefficient of the variable 'location' is found to be in the expected direction which is also significant ($t =2.969$, $p< .01$). Reputation has also direct significant impact on performance level as indicated by $t = 2.04$, with $p< .05$. The overall regression is found to be good fit with R^2 value as .634, and F value being 11.041 which is significant at 1% level.

Table 6.8: Regression Results of Firm Performance, Dharmoda

Independent Variables	Coefficients	t- value	Sig.
(Constant)	7.041*	63.490	.000
Sharing of technology knowledge	.026**	2.174	.034
Relations with customers	.045***	1.846	.071
Relations with suppliers of inputs	.004	.176	.861
Informal relations with firms in the cluster	.041**	2.573	.013
Linkage with external bodies	.025	1.577	.121
Location	.048*	2.969	.005
Trust good faith relationship	.001	.066	.948
Reputation	.038**	2.040	.047
R^2			.634
F			11.041*
Durbin-Watson			1.010

Source: Author Calculation based on Field Survey on 2016
*Indicates 1% level of significance

Further the regression coefficient of firm performance on overall index of relational capital appears to be 0.58 which is significant at 1% level (the corresponding R^2 value being 0.586 and F being equal to 82.09).The correlation coefficient between log value of firm profitability figures and that of relational capital indices turns out to be 0.765 which is significant at 1% level. The implication is that relational capital has significant influence in shaping firm performance.

6.5.3 Remarks

The above analysis reveals that there is reasonably good internal consistency of relational capital indicators. Again it is important to note that if the indicator like "Linkage with external bodies" is deleted, the value of Cronbach's alpha increases. This reflects the relative incoherence of this indicator. From the analysis of the value of perception about the relational capital variables and the regression results, it may be noted that reputation, location of the firms in the cluster, customer relationships, informal relationships with firms in the cluster have relatively high mean values and significant impact on the per capita profitability. This finding is completely in the desired direction. However while mean value of trust and good faith relation has rank 1, this is found to be insignificant and while that of technological knowledge sharing has rank 7, it is observed to be significant in influencing firm level performance. Trust and good faith are considered to be a cornerstone for long persistence of activity in a cluster based enterprises. However mere mutual trust may

not be reflected in productive activity of the firms leading to profitability. Knowledge sharing here is perceived to be relatively unimportant. Since almost all the firms produce articles of the same type/ use same type of technology, there is neither attached great importance nor it is perceived necessary for sharing of knowledge. However evenness of knowledge leads to competitive spirit and better quality that is reflected in significantly better profitability performance. Again the bell metal firms in this region have a long tradition of enterprise based production. The supply of their output in the market through the chain link of mahajans, clustering of a number of skilled enterprise owners in a small neighbourhood and their earlier link with Moradabad group of firms and inclination to excel their production quality have helped spread their reputation. There has therefore been a favourable perception about the informal relation across the firms in the cluster. Because of geographical proximity to metropolitan market at Calcutta, the locational advantage of the cluster is also considerable.

It is however heartening for the firms to maintain good relation with customers. As already stated, maintaining customer repeat rates, stable prices along with good product quality as well as uninterrupted supply of output are some of the factors that contribute to the fostering of good relation with customers. The enterprise owners however do not have to bother much about maintaining good relation with the suppliers of inputs. The input suppliers are mostly mahajans and for their own interest, they subcontract production orders with partial/ full scale supply of necessary inputs.

Overall, the analysis suggests that relational capital is connected with the competitive performance level of small enterprises operating in the bell metal sector in the study region, through the positive relationship of its subcomponents. Moreover, higher the level of relational capital and its associated spillover, better is likely the result in problem solving, planning and management quality of a firm, which over the long run can enhance competitive efficiency and reduce organizational cost.

6.6   Analysis of Brassware Cluster in Nabadwip

Religious fervour pervades this locality and enterprises here have earned reputation for providing various items of worship. Further they also put emphasis on maintaining good relation with customers, input suppliers (mahajan in many cases) and preserving mutual trust and bond across the firms in the cluster. There is mixed response with respect to information spillover and knowledge sharing for better development of the cluster. In order to sustain the semi- competitive market of the artifacts they produce, innovative drive is resorted by many enterprise owners in order to give new design/shape to existing items, or produce new items that might attract customers who often happen to be foreigners. The relational capital index for the considered brass- ware firms in Nabadwip region   has been derived on the basis of application of the principal component method as has been done earlier. From table 6.9 we have an idea about the values of coefficients linked with the normalized values of relational capital for each of eight principal components. The respective Eigen values are shown at the bottom of the table.

 The internal consistency of the eight items in this context has been derived based on Cronbach alpha criterion which is reasonably high at value of 0.71. Calculation as displayed in table 6.10, reveals that if the reputation item is deleted from the list of relational capital items, the aforesaid consistency score slightly improves to .725; this is not incoherent since entrepreneurs did not bother much about their reputation item as they have already developed a sound local goodwill in the process of mutual competition and coordination of their work. Other items seem important since individual deletion from the list lowers the Cronbach alpha value implying decrease in the internal consistency of the scores.

Table 6.9: Coefficients and Eigen Values Based on Normalized Value of Relational Capital Items, Nabadwip

Relational Capital Item	Coefficients							
	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8
X1	0.291329	-0.45004	0.326939	-0.1988	0.397111	0.384207	0.459886	-0.2222
X2	0.357078	0.061016	0.641704	-0.22972	-0.31913	-0.28649	0.019499	0.468952
X3	0.443792	0.267353	0.186128	0.209729	-0.34667	0.411022	-0.34444	-0.49516
X4	0.345443	-0.03278	-0.59553	-0.33569	-0.44788	0.247326	0.316106	0.224856
X5	0.379006	-0.38208	-0.20964	-0.09532	0.337208	0.02287	-0.68444	0.27321
X6	0.364362	-0.31189	-0.1284	0.741157	-0.0913	-0.35872	0.258944	0.009856
X7	0.391791	0.35725	-0.17482	-0.33112	0.307861	-0.55943	0.089005	-0.40375
X8	0.203557	0.591865	-0.03209	0.288077	0.450391	0.313113	0.161658	0.444091
	Eigen value							
	2.749573	1.721034	1.102785	0.637537	0.592438	0.494575	0.45581	0.246248

Source: Author Calculation based on Field Survey on 2017

Table 6.10: Item-Total Statistics, Nabadwip

Relational Capital Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach Alpha if Item Deleted
Sharing of technology knowledge	28.52	5.847	.305	.708
Relations with customers	28.20	5.892	.426	.676
Relations with suppliers of inputs	28.27	5.284	.579	.638
Informal relations with firms in the cluster	28.33	5.955	.380	.685
Linkage with external bodies	28.57	5.877	.458	.670
Location	28.32	5.949	.433	.675
Trust good faith relationship	28.20	5.925	.489	.665
Reputation	28.05	6.591	.178	.725

Source: Author Calculation based on Field Survey on 2017

From table 6.11, one can have an idea about the relative importance put by the firms in the cluster on various relational capital items. It is evident that several items share the same rank in the perception of enterprise owners. The cluster of firms has over time catered to the diverse demand of articles for worship purposes. The reputation of the enterprises has spread far and wide through the experience of religious tourists. So the enterprise owners have been keen on preserving the

Table 6.11: Perceived Status of Relational Capital Items, Nabadwip

Relational Capital Variables	Mean	Standard Deviation	Rank of Mean
Sharing of technology knowledge	3.8	0.7	6.5
Relations with customers	4.2	0.6	2.5
Relations with suppliers of inputs	4.1	0.6	4
Informal relations with firms in the cluster	4.0	0.6	5.5
Linkage with external bodies	3.8	0.6	6.5
Location	4.0	0.5	5.5
Trust good faith relationship	4.2	0.5	2.5
Reputation	4.3	0.6	1

Source: Author Calculation based on Field Survey on 2017

reputation and goodwill of their business. The firms in the cluster in Nabadwip region, have expressed mutually cordial and good faith relation with other firms within a particular geographical locality. They are also interested to maintain good relation with the stakeholders in the market. Sharing of technological knowledge, linkage with external market and informal relations within a cluster are given only moderate importance in the perception of the firms.

6.7   Analysis of the Cluster of foundry firms in Howrah

A sample of 30 foundry firms in the cluster in Howrah region was considered for the analysis. The firms were found thriving in the industry during about the last 70 years. It is usually assumed that the long survival in a competitive market depends on the cordial attitude or behavior of the concerned entrepreneur with the related stakeholders. It generates the firm's production and marketing goodwill and retains a section of customers for the firm's product. Hence the attitudinal behavior of the entrepreneur with the labourer, input seller, other firms in the locality, buyers' mutual trust amongst themselves etc. constitute the relational asset base possessed by the firm that is also expected to contribute to profitability performance of the enterprise.

The relational capital index for the considered foundry firms has been derived on the basis of application of the principal component method as applied before. Cronbach alpha meant to assess the reliability or internal consistency of the set of individual relational capital indicators yield a reasonably good value of .757. The relational capital index is derived as a weighted average where the weights are the Eigen Values.

Table 6.12: Coefficients and Eigen Values Based on Normalized Value of Relational Capital Items, Howrah

Relational Capital Item	Coefficients							
	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8
X1	0.415852	-0.039213	-0.142604	-0.026817	0.765579	0.093352	-0.373137	-0.265362
X2	0.463873	-0.064043	-0.131874	-0.213883	-0.279859	0.067981	0.482887	-0.633610
X3	0.415023	0.099185	-0.209951	-0.628190	-0.056759	0.048826	0.039474	0.609961
X4	0.359114	-0.447154	0.109204	0.513549	0.181635	-0.019178	0.463874	0.383268
X5	0.347274	0.160222	-0.467303	0.416983	-0.367086	-0.438074	-0.365883	0.030842
X6	0.047496	0.797107	-0.105336	0.308653	0.139541	0.368361	0.306419	0.083354
X7	0.232662	0.350477	0.649747	-0.091749	0.105303	-0.613217	0.065792	-0.031514
X8	0.365643	-0.026292	0.504609	0.132743	-0.366116	0.529414	-0.422801	0.016801
	Eigen Value							
	3.321449	1.294340	1.190774	0.652309	0.567479	0.385846	0.313583	0.274221

Source: Author Calculation based on Field Survey on 2017

The first three most important items as displayed in the following table 6.13 reveal that the firms in the cluster put great importance to maintaining their reputation, good relation with customers, suppliers of inputs and keeping trust and faith in mutual relationship, with all the stakeholders in their business. As the firms are located in urban setting and the customers and input suppliers are relatively better educated and knowledgeable persons, hence maintaining goodwill and reputation of the business is given premium importance in the ranking of the enterprise owners. Further they value mutual trust and faith reposed in everyday transactions where huge amount of money is involved. This mutual trust and faith is considered as one important aspect of business dealings. Mutually shared technical knowledge, link with external market bodies as well as informal relation maintained across them and their locational advantage are items which are somewhat relegated in their perception. Often it is observed that labourers shift across firms and with them there is a spillover of technical knowledge. This is not much desirable on the part of entrepreneurs as business secret often gets leaked in the process. But this is often withstood as a common practice. Further the practice of using one firm's infrastructure and skilled labour for producing selective sample items by some other firm, implies that technical knowledge is often not kept confined. A few sample firms were also found interested to supply their product beyond the local levels, across different states or even to neighbouring nations. In the process total volume of production and employment in the cluster are expected to grow. It is often a fact

that continued improvement is not achieved without learning from outside the cluster especially abroad. (Sonobe et al , 2014). Some of the entrepreneurs have been keen on learning from experiences of successful enterprise owners in neighbouring countries. This purpose was reflected in their attitude to link with external purchase agencies. But this did not emerge as a common practice. Further their locational advantage as well as informal cordial relation had been weakly vindicated over their responses

Table 6.13: Perceived Status of Relational Capital Items, Howrah

Relational Capital Variables	Mean	Standard Deviation	Rank of Mean
Sharing of technology knowledge	3.60	0.76	8
Relations with customers	4.40	0.55	2
Relations with suppliers of inputs	4.20	0.60	3.5
Informal relations with firms in the cluster	4.00	0.63	5.5
Linkage with external bodies	3.77	0.67	7
Location	4.00	0.63	5.5
Trust good faith relationship	4.20	0.70	3.5
Reputation	4.70	0.46	1

Source: Author Calculation based on Field Survey on 2017

The regression results (as in table 6.14) of profitability figures on the chosen indicators of relational capital suggest that out of eight, three indicators have significant and expected sign impact on profitability. The coefficient of variable 'Location' is positive with a value of .140 and significant (t= 3.014 and p<.01). Similarly the item 'informal relation with firms in the cluster' has positive impact on log values of profitability, with its coefficient being .171 and also observed to be significant (t = 3.109 and p< .01). Further relation with customers also appear to be significant (t = 2.281 and p< .05). The overall regression is found to be good fit with R^2 value being 0.78 and significant at 1 %. Thus relational capital items serve to influence the profitability figures. The correlation coefficient between overall relational capital index and log value of per capita profitability comes out to be .783 which is significant at the 0.01 level.

Table 6.14: Regression Results of Firm Performance, Howrah

Independent Variables	Coefficients	t	Sig.
(Constant)	6.874	20.659	.000
Sharing of technology knowledge	0.051	1.137	.268
Relations with customers	0.165	2.281	.033
Relations with suppliers of inputs	-0.014	-0.232	.819
Informal relations with firms in the cluster	0.171	3.109	.005
Linkage with external bodies	0.028	0.578	.570
Location	0.140	3.014	.007
Trust good faith relationship	0.057	1.292	.210
Reputation	-0.026	-0.348	.732
R^2			0.78
F			9.58***

Source: Author Calculation based on Field Survey on 2017

6.8 Analysis of the Shovabazar Hosiery Cluster

A number of 30 firms were surveyed in the locality and it was found that some of them were performing their business for quite a long time now. However majority of the firms do not show much interest in terms of either of technical knowledge sharing, informal relations with firms in the locality or keeping link with external bodies. The firms in this cluster have expressed their perception in terms of maintaining mutually cordial and good faith relation with other firms. They are also interested to maintain good relation with the customers and suppliers in the market.

Principal component method has been applied to derive the relational capital index for the considered hosiery firms. The coefficients of the variables in respective principal components and corresponding Eigen values are presented in table 6.15. Cronbach alpha meant to assess the reliability or internal consistency of the set of individual relational capital indicators yield a reasonably good value of .757.

Table 6.15: Coefficients and Eigen Values Based on Normalized Value of Relational Capital Items, Shovabazar

Relational Capital Item	Coefficients							
	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8
X1	0.347626	-0.19738	-0.09572	-0.6185	-0.41296	0.519923	-0.06367	0.059866
X2	0.418909	-0.2733	-0.19491	0.366121	-0.09506	0.063253	0.651011	-0.37541
X3	0.370299	-0.30569	0.33727	0.547955	-0.05052	0.217778	-0.36103	0.418455
X4	0.329605	0.012459	0.713485	-0.35811	0.397409	-0.15883	0.264275	-0.03005
X5	-0.04528	0.708351	0.174122	0.212286	0.012966	0.619417	0.191555	-0.01632
X6	0.369536	0.057472	-0.43242	-0.04552	0.706605	0.181456	-0.33086	-0.17147
X7	0.396693	0.369676	0.122044	0.066664	-0.39153	-0.32719	-0.4164	-0.50289
X8	0.402416	0.388614	-0.31279	-0.05778	-0.08477	-0.35968	0.228916	0.630004
	Eigen Value							
	3.638988	1.482728	0.765671	0.677568	0.613675	0.481933	0.26668	0.072757

Source: Author Calculation based on Field Survey on 2018

Table 6.16: Item-Total Statistics, Shovabazar

Relational Capital Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sharing of technology knowledge	31.37	5.068	.454	.738
Relations with customers	30.67	5.609	.594	.710
Relations with suppliers of inputs	30.73	5.720	.502	.724
Informal relations with firms in the cluster	30.90	5.679	.496	.724
Linkage with external bodies	31.63	6.999	-.080	.833
Location	30.77	5.564	.563	.713
Trust good faith relationship	30.73	5.306	.705	.689
Reputation	30.77	5.289	.698	.689

Source: Author Calculation based on Field Survey on 2018

It is observed from table 6.16 that only if one item i.e Linkage with external bodies is removed from the list, the Cronbach alpha increases in value to 0.833. Its relative less importance in the list is also vindicated when its mean value in Likert scale is found to be least as evident from table 6.17. Firms are found to put more importance on maintaining relation with customers and input suppliers, mutually affable and warm relationship with firms in the cluster based on trust and faith. The enterprise owners often remain concerned about how to avoid low trust and faith from fellow producers. Poor Working Environment, very low wage rate mainly in stitching Sector, absence of in house production facility, non-availability of technical institution for upgradation of product, presence of child labour. etc. often interfere with relational capital items and cause no significant impact of these on

profitability aspect of the enterprises. This also becomes evident when the correlation between log of per capita profitability and relational capital index is found insignificant at value 0.12.

Table 6.17: Perceived Status of Relational Capital Items, Shovabazar

Relational Capital Variables	Mean	Standard Deviation	Rank of Mean
Sharing of technology knowledge	4.00	0.73	7
Relations with customers	4.70	0.46	1
Relations with suppliers of inputs	4.63	0.48	2.5
Informal relations with firms in the cluster	4.47	0.50	6
Linkage with external bodies	3.73	0.63	8
Location	4.60	0.49	4.5
Trust good faith relationship	4.63	0.48	2.5
Reputation	4.60	0.49	4.5

Source: Author's Calculation based on Field Survey on 2018

In general the performance of an enterprise is also governed by its competitive strength, urge and aptitude to adjust and cope with the external environment and internal factors.

Internal factors include actions taken by the enterprise related to its financial condition, owned material resources, relational capital, attitude towards business dealings, its development strategy and methods of management. Again each enterprise works under the influence of the environment beyond its control and tries to adjust its process of operation accordingly. The interactive nature of this relationship is manifested in the fact that the organisation sets relevant products in response to markets needs and undertakes production consistent with prevalent business environment condition.

The competitiveness of the enterprise is derived from its ability to use available resources in the process of acquiring the share of customers and maintaining the goodwill of the organization by fair business dealings with each stakeholder. In an era of increasing competition, while each enterprise must strive hard to maintain its share of customers and amiable market transactions, it also should try to adjust with rising business uncertainty and unrest in the environment by constantly adjusting its tactics and strategies and the organization must constantly adapt and improve its products.

Chapter Seven

Analysis of Business Environmental Aspects and Entrepreneurial Strategy

7.1 Introduction

The concept of entrepreneurship is too complex to be explained by a single set of factors. Combining the definition of Schumpeter, Korzner, Bygrave and Hofer, an entrepreneur is defined as one who perceives a profit opportunity and undertakes an organisation to initiate newer product and technology to achieve the objective with some degree of risk.

The blossoming of the process of entrepreneurship is usually supposed to be conditioned by the psychological factors and mental make-up to accept challenges, motivational factors that goad him to launch new ventures and socio-economic and cultural environment pervading around him. The drive to launch a manufacturing unit and continue it through the support of off-springs and hired labour specially in the neighbourhood of an industrial cluster, is conditioned by the aptitude and orientation to take risk and mental and psychological upbringing to face challenges in uncertain market condition together with a set of external factors conducive to flourishing of business which is clubbed as entrepreneurial environment. It encompasses a host of overall economic, cultural, social and political dimension that promote or even sometimes may also discourage entrepreneurial propensity of an individual. The entrepreneurial environment, generally speaking comprises a variety of forces that are beyond the control of the entrepreneur thus, it can create both opportunities and threats for firms (Bourgeois, 1980).Gnyawali and Forget grouped the entrepreneurial environment into five dimensions–Govt. policies (import/export restrictions, entry barriers etc.), socio-economic conditions (public attitude towards entrepreneurship, presence of experienced entrepreneurs etc.), entrepreneurial and business skill (entrepreneurial training programmes, availability of information etc.),

financial support to business (venture capital, low cost loan)and non-financial support to business (counseling and support services). This view is also corroborated by the remarks of Lee and Petersen (2000) when they hold that entrepreneurial success is not only a condition of traits and behaviours of individuals but also the environment in which entrepreneurship takes place. Wilken (1979) visualises the importance of a conducive socio-economic environment to the growth of entrepreneurial activities. While environmental variables have a bearing on the structure and performance of an industrial enterprise, the strategic components adopted to achieve the functioning and influence the structure are no less important.

Michael Porter is recognized as a great contributor to the strategic issues in the perspective of maintaining business. According to Porter (1996) a strategy can be seen as a combination of activities. Strategy means creating connection in the activities of a firm. If there were only one ideal position, there would be no need of strategy. His idea regarding positioning school has been a pioneering one in the domain of strategy. It advocates that a business should try to improve financial performance by achieving 'competitiveness through positioning', which helps detect whether a firm's profitability lies above or below the industry average. Porter's positioning school rests on the assumption that the industry environment largely determines the firm's freedom of choice of action. In other words, the environment has great influence on choice of firms' strategies. The underlying logic of the positioning approach is to first understand the environment and next position/status of the firm with regard to choice of strategy. Miller and Frisen (1883) observed that though there have been a number of studies involving the relation between environment and structure on one hand and relating to strategy and structure on the other, the third aspect covering the link of environment strategy relation has been rather neglected. Such studies have not been adequately taken in developing countries. In this context it seems imperative to undertake a study (i) for identifying the important environmental challenges faced by entrepreneurs, that have a bearing on their functioning in the context of some industrial cluster in West Bengal, India (ii) for making out the strategies preferred by such entrepreneurs and to focus on their dimensions and (iii) to find the relationship between environmental and strategic aspects.

7.2   Literature on Business Environment and Strategic Issues

Klapper et al., (2007) conceptualises a favourable business environment in terms of the leeway embedded in regulatory environment that promotes the launching and operation of a business. It encompasses issues like starting a business, dealing with licenses, employment and retrenchment of workers, registering property, access to credit, protecting investors, paying taxes, cross border business etc. The level of economic development and functioning of institutions in a country have a bearing on the environment in terms of quality of governance, access to capital, labour and other resources, marketability opportunities, tax and subsidy policies etc. The business environment influences the dynamics of entrepreneurship in any country and attitude of the prospective entrepreneurs.

Extending the aforesaid dimension, there have been some studies which focus on an extended dimension of external environmental factors such as the business environment (e.g., government regulation and access to financing), socio-cultural factors (e.g., the social status of entrepreneurs and the value placed on innovation), and political factors (e.g., democracy), that shape investors' motivation and intentions (Brandstatter, 1997; Begley &Tan, 2001; Perotti & Volpin, 2004).Wang et al.,(2001) and Aldrich (2000) opine that external environmental factors are more useful in understanding business start-up than personal traits.

 The blossoming of the type and functions of entrepreneurship are often said to be shaped by the presence of certain factors in the external environment of the entrepreneur which is often beyond his control. Borkowski and Kulzick (2006) conceptualise the interplay between entrepreneurship and environment as follows:

a. new venture strategies are formed in response to environmental forces;

b. entrepreneurs are usually unsettled in case of political interference; and

c. unstable environments are not conducive to growth prospects .

There are different ways to look at strategy and the position strategy takes in an organization and the management process. Mintzberg (1990) views strategy as indicative of a plan, a ploy, a pattern, a position or a perspective - the 5 Ps. He

defines strategy in terms of a process. He considers strategy as a *pattern* in a stream of decisions. While streams of behaviour can be segregated, strategies as an integrated whole can be identified as a pattern of consistent behavioural norm. Van Gelderen, Frese and Thurik (2000) regard strategies at the individual level as plans for actions that influence the achievement level. The concept of strategy focuses on how an entrepreneur tries to reach a goal. Chandler (1962) sees strategy in terms of growth and strategic decisions are linked with the long-term health of an enterprise. At the initial phase it involves plants, sales offices, or warehouses in a single industry, a single location, and performance of a single function. In the event of its success, the company is likely to follow a predictable plan. He distinguished the following types of strategy: volume expansion, geographic expansion, vertical integration and product diversification. Seth and Thomas (1994) provide the following definition of strategy: 'A strategy is the pattern or plan that integrates an organization's major goals, policies and action sequences into a cohesive whole. A well-formulated strategy helps to marshal and allocate an organization's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents'.

7.3   Dharmoda Bell Metal Cluster

The data were collected from the clustered firms producing bell metal items in Dharmada region of Nadia district in the state of West Bengal in India. A sample of 60 firms were covered in the study on the basis of face to face interview with the owner of the firms, based on a pre-structured questionnaire. The owners were favoured as respondents to the questions, since they shouldered the day to day management responsibility and actively participated in overall decision making process. Tabular analysis has been carried out in order to show the relative strength of perception of entrepreneurs regarding business environmental variables and strategic components. Likert scaling has been resorted to for this purpose .Exploratory factor analysis based on principal axis factoring with varimax rotation has been resorted to in order to shorten the impact of multiple perceived environmental and strategic choice responses in terms of latent components called factors. Further canonical correlation analysis has been carried out in order to find

the degree of correlation between the set of business environmental variables and the set of strategic components, the strength of link between which is likely to influence the level of performance of an enterprise.

7.3.1 Analysis of Environmental Aspects

Economic environment reflected in the labour, machinery and other input condition, access to finance, competition from substitute products, as well as marketability based on easy transport etc. have a bearing on the level of effort put forth by potential enterprise operators. Further socio- political environment embedded in attitude of local govt., regulatory measures, ecological norms, infrastructural condition etc. also shape the behaviour of firms. The level of access to financial facilities and attitude of concerned banking officials greatly influence the business decisions and strategies that might be resorted to by the enterprise owners. Labour market, availability of raw material/machinery on hire purchase on easy terms, facilitate the operation of the entrepreneurs. The perception on the part of the firm about marketability of their product is one important dimension that entices them to the industry. Without adequate market opportunities firms are likely to scale down their operation or leave the industry. Competition from substitute products however reduce the prospect of growth that the enterprise owners might be aspiring after. The local infrastructural advantages are often observed to influence the production decision and incentivise strategies for business growth. Further attitude of local Govt. and level of implementation of regulatory measures have an impact on the intensity of productive activity and associated business behaviour by the entrepreneurs. Again the extent of imposition of ecological standards and **administrative** procedure also have a bearing on the status of operation of enterprise owners.

Since it is not easy to capture the perception of the enterprise owners about the importance and impact of business environmental factors, questionnaire has been designed in such a manner that the attitude and perception of entrepreneurs towards environmental factors can be recorded. This has been done on the basis of use of 5-point Likert scaling whereby scores attached on each of the environmental components by all the selected survey respondents have been considered for further analytical processing. Altogether ten business environment components have been

considered. Similar method has also been followed with respect to strategic variables.

From the table-7.1 below it is evident that the mean Likert score helps the perception of importance and impact of the environmental issues. Using 5-point Likert scaling, it is observed that transport and marketability is considered to be the major environmental factor followed by level of infrastructure, congenial rules & regulation relating to the registration, non- strict ecological laws, easy administrative procedures (regarding permits, quota etc.) etc. Excepting the issues involving access to financial facilities, exposure to competition from substitute producers, labour market condition, marketing scope and administrative intricacies, majority of the respondents asserted their perceptions on the higher side of the mean value.

Table-7.1: Mean and Standard Deviation of the Environmental Variables, Dharmoda

Environmental Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Access to Finance from Institutional Source	2.05	0.85	13.3	86.7
Attitude of Local Government	1.62	0.85	56.7	43.3
Competition from Substitute Product	2.38	0.85	33.3	66.7
Level of infrastructure (electric power, transportation, communications, etc.)	3.78	0.85	71.7	28.3
Labour Condition	3.00	0.85	41.7	58.3
Machinery on Hire Purchase	3.23	0.85	50.0	50.0
Availability of Raw Materials	3.28	0.85	55.0	45.0
Rules & Regulation Relating to the Registration	3.53	0.85	53.3	46.7
Enforcement of Ecological Laws	3.47	0.85	53.3	46.7
Transport & Marketing	4.00	0.85	18.3	81.7
Administrative procedures (to acquire permits, etc.)	3.30	0.85	45.0	55.0

Source: Author Calculation based on Field Survey on 2016

Factor analysis has been employed in order to express the variability among observed, correlated environmental variables in terms of a potentially lower number of unobserved variables called factors. It seeks to find out the association of multiple observed environmental variables that have similar patterns of responses with some latent (not directly measurable) variable. The significance of factor analysis in the context of perceived environmental variables is reflected in the following table-7.2.

Sampling adequacy based on Keiser-Meyer-Olkin measure is found to be 0.608 and Bartlett's test of Sphericity was significant at 1%. The results in table 7.3 below, identifies 3 factors based on exploratory factor analysis, which explain 44.72 percent of the cumulative variance.

Table-7.2: KMO and Bartlett's Test in case of Environmental Variables, Dharmoda

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.608
Bartlett's Test of Sphericity	**Approx. Chi-Square**	175.423
	Df	55
	Sig.	.000

Source: Author's Calculation based onField Survey on 2016

Table-7.3: Factor Matrix and Communalities in Case of Environmental Variables, Dharmoda

Environmental Variable	Factor Matrix[a]			Communalities
	Factor 1	**Factor 2**	**Factor 3**	
Level of infrastructure (electric power, transportation, communications, etc.)	.827			.687
Availability of Raw Materials	.736	.369		.678
Transport & Marketing	.645	.112	.283	.509
Labour Condition	.409	-.221	-.311	.312
Competition from Substitute Product	-.344	.104		.130
Enforcement of Ecological Laws	.163	-.800		.669
Attitude of Local Government		.684		.475
Rules & Regulation Relating to the Registration	.389	-.556	.261	.529
Access to Finance from Institutional Source		.102	.531	.302
Machinery on Hire Purchase	.158	.131	.488	.280
Administrative procedures (to acquire permits, etc.)	.380	.100	-.440	.348
% of variance	20.827	15.127	8.768	

Source: Author's Calculation based on Field Survey on 2016
Extraction Method: Principal Axis Factoring
a. Attempted to extract 3 factors. More than 10 iterations required.

The *Factor Matrix* shows the factor loadings prior to rotation which are correlations between the variable and the factor. Low correlations (with value 0.3 or less) are not accounted since these are probably not meaningful anyway. The first factor embraces all the components excepting Attitude of Local Government and Access to Finance from Institutional Source. The factor loadings show that the factors are fairly desirable with seven variables in the first factor having value greater than .30. It explains 20.83% of total variance. It can be called as Business Opportunities. The second factor contains ten variables and explains 15.13 % of total variance. However only four variables viz. Availability of Raw Materials, Enforcement of

Ecological Laws, Attitude of Local Government and Rules & Regulation Relating to the Registration contain loadings which have reasonably higher absolute values. This can be called as Regulatory Support. The 3rd factor contains six variables and explains 8.77 % of total variance. However only four variables, Labour Condition, Access to Finance from Institutional Source, Machinery on Hire Purchase and Administrative procedures (to acquire permits, etc.) have relatively higher absolute loadings. This can be referred to as Input Market Condition.

Factor analysis uses variances to produce communalities between variables. The variance is equal to the square of the factor loadings. The communality is the variance in the observed variables which are accounted for by a common factor or *common variance*. The communality is the summation of the squared correlations of the variable with the factors. The values in the table-7.3 represent the factor loadings and how much the variable contributes to each factor; in this case, it contributes the most to Factor 1.The calculated communality shown above means that 69% of variable 1 can be predicted based on the infrastructure of the three factors; hence, the communality is the variance accounted for by the common factors. A particular set of factors is said to explain a lot of the variance of a variable if it has a high communality. In this context, Level of infrastructure, Availability of Raw Materials, Enforcement of Ecological Laws, Rules & Regulation Relating to the Registration and Transport & Marketing appear significant as a high % (greater than 50 %)of their variance is explained by the 3 factors. Business opportunities in the cluster of firms appears as most important conductive factor for initiating business operations. Regulatory support emerges as the next important factor for sustaining the business performance followed by the emergence of input market condition which is conducive to growth of the enterprise through better profitability.

7.3.2 Analysis of Strategic Aspects

Focus on strategic choice has an important role in the firms' achievement process. The perceived status of strategic choices provides the direction that a firm nurtures in mind and in which way the goals are expected to be achieved.

In order to withstand the forces of competition, sustained attention is given in improving the quality of the product so that the market share can be maintained or enhanced. Better quality is linked with improved productivity. The entrepreneurs are often rather small and suffer from lack of adequate finance. Hence strategic focus is given on increased capacity utilization through better productivity. Unused capacity is likely to increase implicit cost. Strategic diversification is adopted to produce alternative good in order to cope with the uncertainties in market demand associated with a single product. Entrepreneurs often seek to widen their command over local people through engendering opportunities for new job. Automation is a cherished strategic apparatus which is desired for quicker and better finished production. Further searching for market opportunities in distant locations apart from local area often surfaces as an important strategy.

From the table-7.4 below it is evident that increasing the productivity is the most important strategic choice on the part of the surveyed enterprises, followed by enhanced capacity utilisation, quality improvement etc. Excepting reduction in cost, majority of the respondents expressed their perception on the higher side of the mean value. Least variability in perception about strategic choices is observed with respect to diversification strategies.

Table-7.4: Mean and Standard Deviation of the Strategic Variables, Dharmoda

Strategy Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Improving Quality Standard	3.95	1.06	76.7	23.3
Improving Productivity	4.05	1.01	81.7	18.3
Increasing Capacity Utilisation	3.97	1.12	75.0	25.0
Expanding Capacity	3.92	1.08	76.7	23.3
Diversification Strategies	2.70	0.92	51.7	48.3
Reduction in Costs	2.98	1.20	50.0	50.0
New Job Creation	3.28	1.21	65.0	35.0
Automation	3.75	1.07	65.0	35.0
Increasing Sale in Outer Locality	3.20	1.30	63.3	36.7

Source: Author Calculation based on Field Survey on 2016

Factor analysis has been carried out in order to reflect the importance of joint variation of observed strategic variables in response to unobserved latent variables. The Sampling adequacy based on Keiser-Meyer-Olkin measure in respect of strategic choices is found to be 0.829 and Bartlett's test of Sphericity significant at 1%. The results in table-6 below, identifies 2 factors based on exploratory factor analysis, which explain 55.08 % of the cumulative variance.

Table-7.5: KMO and Bartlett's Test in case of Strategic Variables, Dharmoda

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.829
Bartlett's Test of Sphericity	Approx. Chi-Square	268.400
	Df	36
	Sig.	.000

Source: Author Calculation based on Field Survey on 2016

Only two factors emerge as latent measures that encompass the effect of the strategic variables. The first factor embraces all the nine strategic components each of which have reasonably high correlation with the factor. This can be termed as diversified strategy. The second factor contains only three components like Increasing capacity utilisation, Expanding capacity and new job creation that have loadings i.e. correlation (in absolute value) greater than 0.3 with the factor. This factor can be termed as volume oriented growth**.**

Table-7.6: Factor Matrix and Communalities in Case of Strategic Variables, Dharmoda

Strategy Variable	Factor Matrix[a]		Communalities
	Factor 1	Factor 2	
Improving Productivity	.834	-	.698
Increasing Capacity Utilisation	.819	-.391	.823
Expanding Capacity	.775	-.510	.861
Increasing Sale in Outer Locality	.715	.290	.596
Improving Quality Standard	.713	.219	.556
Automation	.689	.131	.492
New Job Creation	.600	.358	.488
Diversification Strategies	.457	-.115	.222
Reduction in Costs	.454	.121	.221
% of variance	47.074	8.013	

Source: Author Calculation based on Field Survey on 2016

Extraction Method: Principal Axis Factoring

a. 2 factors extracted. 18 iterations required.

The joint contribution of the factors that explain a substantial variance of the strategic components is reflected in the communality score. Here expanding capacity and increasing capacity utilisation have high communality value followed by improving productivity and so on. All the three components in the 2nd factor termed as business growth have reasonably high communality and their variation is well explained by the two factors. However some other components also have high communality value. The implication is that all the enterprises have the lurking strategic focus on growth in volume, however due to paucity of fund and other opportunities, often they face acute problems.

7.3.3 Canonical Correlation Analysis

Improved performance is a crucial objective of sustainable business growth and is closely linked to perceived condition of business environment and stress on corresponding strategies. Business environmental conditions are multi-dimensional in character and in many ways they govern the choice of and stress on strategies that have ultimate bearing on a firm's profitability.

The correlative inter-linkage between a set of environmental variables and choice of a set strategies which shape the performance of a business enterprise can be suitably represented by considering the canonical correlation analysis. Canonical correlation is a multivariate statistical technique, which measures the strength of relationship between two composite sets of variables. In this case, each set is considered as a

latent variable based on measured indicator variables in its set, and the canonical correlation is optimised such that the linear correlation between the two latent variables is maximised. The objective of canonical correlation is not to model the individual variables, but to explain the relation of the two sets of variables. In this analysis, we seek to find such a linear combination of one set of variables that produces the largest correlation with the second set of variables. This linear combination or ''root'' is extracted, and the process is repeated for the residual data, with the constraint that the second linear combination of variables must not correlate with the first one. The process is repeated until a successive linear combination is no longer significant. Maximum number of canonical correlations equals the number of variables from the smallest variable set.

A typical use for canonical correlation in the experimental context is to take two sets of variables and see what is common among the two sets. Square of the coefficient represents the amount of variance in one canonical variable (C.V) accounted for by the other C.V. It is also called shared variance between two C.Vs. It is directly analogous to the R^2 effect in multiple regression.

In our analysis, canonical correlation is obtained between 2 groups of variables. In one group, we have considered all the environmental variables and in the other, we have included the perceived responses regarding strategic choices. The results of the analysis are given in the following Tables. Here maximum nine canonical correlations are possible corresponding to the number of variables included in the second set. Eigen value represents the extent of shared variance between two sets of variables. The root of the Eigen value indicates the value of canonical correlation. First coefficient value corresponding to canonical dimension F1 represents the highest interrelation possible between first 2 sets of canonical variables.

Table-7.7: Canonical Correlations between Environmental and Strategic Factors, Dharmoda

F1	F2	F3	F4	F5	F6	F7	F8	F9
0.818	0.658	0.626	0.537	0.417	0.381	0.295	0.169	0.078

Source: Author's Calculation based on Field Survey on 2016

Successive values represent correlation between the residuals of the variables. In order to test the significance of this correlation, a test statistic is developed called

Wilks' Lambda. Its significance is taken care of by considering the value of the F statistic.

The first test of dimensions, tests whether all nine dimensions are significant, i.e. whether both pairs of canonical variates in the dimensions are significantly related in a linear form. The next test tests whether dimensions F2, F3, and F4 combined are significant and so on.

Table-7.8: Wilks' Lambda Test, Dharmoda

Lambda	F	DF1	DF2	Pr> F
0.051	1.525	99	286.4709	0.004
0.153	1.131	80	262.2654	0.236
0.269	0.987	63	237.0224	0.510
0.443	0.790	48	210.7199	0.833
0.622	0.625	35	183.3145	0.950
0.754	0.545	24	154.7077	0.959
0.882	0.388	15	124.6266	0.980
0.966	0.203	8	92	0.990
0.994	0.095	3	47	0.962

Source: Author Calculation based on Field Survey on 2016

Generally, a canonical correlation that is less than 0.30 (even if it is significant) should not be taken under consideration, since it is trivially small and the percentage of variance shared by the two canonical variates is only 9 % or less. In the present case although 6 canonical correlations appear to have high (> 0.30) value, only the first is significant as evident from Wilks' lambda test. The Eigen value reflects that the first coefficient explains about 67% of shared variance.

Table-7.9: Eigen values, Dharmoda

	F1	F2	F3	F4	F5	F6	F7	F8	F9
Eigenvalue	0.669	0.433	0.392	0.288	0.174	0.145	0.087	0.028	0.006
Variability (%)	30.083	19.472	17.638	12.974	7.834	6.537	3.910	1.279	0.272
Cumulative %	30.083	49.555	67.193	80.167	88.001	94.539	98.449	99.728	100.000

Source: Author Calculation based on Field Survey on 2016

Overall it is evident that the set of environmental variables is quite organically associated with the set of strategic components. While the perceived environmental aspects have the flavour of the structure that are deemed fit with the operation of the enterprises, the strategic variables cover the importance of the aspects of conduct in the context of S-C-P (structure-conduct-performance) model. The prevalent conditions of business environment especially that of level of infrastructure, availability of raw materials, marketing opportunities, rules and regulation imposed

by Govt. etc. are taken seriously by the surveyed enterprises and accordingly they try to adjust their strategic choices reflected mostly in capacity utilisation and expansion, achievement of better productivity, up-gradation of quality, extension of sales etc.

7.3.4   Remarks

The factor analysis helps isolate major variables that have a bearing on perceived environmental and strategic components. An organisation chooses a definite strategic course of business in coherence with the environmental aspects affecting the business. The canonical correlation analysis suggests that the set of major perceived environmental variables have a reasonably close linear association with the set of deemed strategic responses that are mostly considered fit in the relevant context. However environmental components like access to finance, competition from substitute product, labour market and hire purchase condition are not considered to be favourable by the bell metal item producers in the region. Although these are often regarded as important for flourishing the business, the entrepreneurs here feel critical about the absence of any sound scope of access to finance and availability of skilled labour that might help enhance their product diversification possibilities and up-gradation in quality. Further, diverse type of quality but low cost substitute items from producers at Moradabad in the state of UP (Uttar Pradesh) is exposing them to fierce competition for sustenance in the market. The surveyed enterprises are mostly family- run having profitable ancestral business with some degree of certainty. But lack of formal training opportunities adversely affects their ability and vision and undermines the spirit to resort to innovation exercise. The production by the enterprise owners is mostly tied to the demand and input assistance served by the local mahajans. They place order of production of particular items on the local bell metal item producers and hence they get assured of the marketability of their product. The tie–up with mahajans weaken their diversification scope. In many cases the enterprise owners cannot draw substantial production order from the mahajans because of low capacity base. The desire to dominate the supply market and maintaining close bond with the mahajans drive them to focus on capacity expansion and full use of the existing capacity. Perceived congenial infrastructural facility, availability of required raw material, transport and

marketing access, non-strict Govt. regulatory measures spur their desire for expanding capacity, utilisation of existing capacity and better productivity even if they have to take loans from mahajans for the purpose, in the event of poor access to institutional finance. Further the enterprise owners cannot put much stress on reduced cost since with existing technology and input supply by mahajans, together with deprivation of adequate institutional financial support, they can little venture for resorting to cost reducing automation processes. This is indicative of a static view towards their future promotional drive. Strong Govt./ Non Govt. financial support and motivation as well as better training opportunities for creating a skilled labour base are required to enable the entrepreneurs undertake the drive of installation of better machineries and strategic diversification commensurate with capacity expansion and better productivity achievement.

7.4   Nabadwip Brass- ware Cluster

The data were collected from the clustered firms producing brass ware items in Nabadwip region of Nadia district in the state of West Bengal in India. A sample of 60 firms were covered in the study on the basis of personal interview and direct interaction with the owner of the firms, based on a pre-structured questionnaire.

7.4.1   Analysis of Environmental Aspects

A firm's environment refers to an aggregate of those external factors that have potential impact on its functioning. In case of brassware cluster in Nabadwip, it was observed that congenial business environmental perception of the enterprise owners is tilted mostly towards transport and marketing facility followed by level of infrastructure, raw material availability, administrative procedures, ecological laws etc. In this respect there is some similarity with that in Dharmoda region. More than fifty percent of the entrepreneurs expressed their opinion on the higher side of mean value with regard to access to transport and marketing , availability of raw materials, level of infrastructure, machinery on hire purchase and competition from substitution products. With respect to other categories   majority perception reflects certain reservation beset with some problems.

Table 7.10: Mean and Standard Deviation of the Environmental Variables, Nabadwip

Environmental Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Access to Finance from Institutional Source	2.40	0.99	40.0	60.0
Attitude of Local Government	2.48	0.92	33.3	66.7
Competition from Substitute Product	2.82	1.02	51.7	48.3
Level of infrastructure (electric power, transportation, communications, etc.)	3.90	0.83	76.7	23.3
Labour Condition	3.18	1.01	50.0	50.0
Machinery on Hire Purchase	3.37	0.91	58.3	41.7
Availability of Raw Materials	3.85	0.68	78.3	21.7
Rules & Regulation Relating to the Registration	3.23	0.59	18.3	81.7
Enforcement of Ecological Laws	3.40	0.66	30.0	70.0
Transport & Marketing	3.97	0.71	83.3	16.7
Administrative procedures (to acquire permits, etc.)	3.48	0.72	38.3	61.7

Source: Author Calculation based on Field Survey on 2017

Factor analysis has been carried out in order to capture the variability of a host of observed environmental variables in terms of a smaller number of unobserved variables.

Sampling adequacy based on Keiser-Meyer-Olkin measure is found to be 0.653 and Bartlett's test of Sphericity was significant at 1%. The results in table 7.12 below, identifies 3 factors based on exploratory factor analysis, which explain 44.52 percent of the cumulative variance.

Table 7.11: KMO and Bartlett's Test in case of Environmental Variables, Nabadwip

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.653
Bartlett's Test of Sphericity	Approx. Chi-Square	167.408
	Df	55
	Sig.	0.000

Source: Author Calculation based on Field Survey on 2017

In the Factor Matrix the first factor embraces all the components excepting competition from substitute products. The factor loadings show that the factors are fairly desirable with seven variables in the first factor having value greater than .30. It explains 23.66% of total variance. It can be called as Business Opportunities. The second factor contains nine variables and explains 13.09% of total variance.

However only four variables, local govt, rules and regulations, ecological laws and access to institutional finance contain loadings which have reasonably higher absolute values. This can be called as institutional Support. The 3rd factor contains eight variables and explains 7.77 % of total variance. But only four variables, raw materials, machinery and Access to Finance contain relatively higher loadings. This can be considered as input support. Credit supply from mahajans linked with local business as well as based in Calcutta, ease the availability of finance or other material inputs. A congenial business environment with institutional support, easy access to resources and improved marketing condition have a great impact on the bell metal firm's performance which is to some extent attenuated by competition from substitute product, inadequate infrastructural support as well as labour market condition.

Table 7.12: Factor Matrix and Communalities in Case of Environmental Variables, Nabadwip

Environmental Variable	Factor Matrix[a]			Communalities
	Factor 1	Factor 2	Factor 3	
Transport_Marketing	.753	-.137	-.260	.653
Labour_Cond	.617	-.293		0.468
Administrative_Procedures	.611	.273	.189	0.484
Local_Govt	.611	-.516		0.645
Raw_Materials	.590	.130	.335	0.477
_infrastructure	.581		-.270	0.41
Rules_Regulation_Registration	.209	.751	.218	0.655
Ecological_Law	.308	.493		0.34
Machinery	.170	-.168	.481	0.289
Access_fin_inst_source	-.231	-.376	.457	0.404
Competition_Subs_Prod			.262	0.072
% of variance	23.66	13.09	7.77	

Source: Author Calculation based on Field Survey on 2017
Extraction Method: Principal Axis Factoring. a. 3 factors extracted. 14 iterations required.

The values in the table-7.12 represent the factor loadings and how much the variable contributes to each factor. In this case, it contributes the most to Factor 1. Communalities represent the explained variance of a variable through a set of factors. In this context, transport and marketing, local govt. support and rules and regulation appear significant as a high % (greater than 50 %)of their variance is explained by the 3 factors. Business opportunities in the cluster of firms appear as most important conductive factor for initiating business operations. The region being located in a religious belt strewn with temples and adjacent to Iskon (Mayapur),

provide a sustained base of demand for various items of worship made of Brassware. Institutional support emerges as the next important factor for sustaining the business performance followed by a congenial input condition which arises due to the regularity in supply of inputs (be it mahajans./ local suppliers).

7.4.2 Analysis of Strategic Aspects

The table-7.13 below focuses on enhanced new job creation as the most important strategic choice (based on mean value of Likert scaled items) on the part of the surveyed brassware item producing entrepreneurs, followed by improving the productivity, quality, enhancing the capacity etc. Majority of the respondents expressed their perception on the higher side of the mean value with regard to items like improving the quality and productivity standard as well as reducing the costs. Least variability in perception about strategic choices is observed with respect to responses regarding new job creation while most variability is recorded by item like reduction in cost.

Table 7.13: Mean and Standard Deviation of the Strategic Variables, Nabadwip

Strategy Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Improving Quality Standard	4.08	0.92	36.7	63.3
Improving Productivity	4.08	0.82	31.7	68.3
Increasing Capacity Utilisation	3.97	0.84	80.0	20.0
Expanding Capacity	3.98	0.81	80.0	20.0
Diversification Strategies	3.42	0.95	51.7	48.3
Reduction in Costs	3.40	1.02	45.0	55.0
New Job Creation	4.97	0.18	96.7	3.3
Automation	3.82	0.90	68.3	31.7
Increasing Sale in Outer Locality	3.52	0.94	60.0	40.0

Source: Author Calculation based on Field Survey on 2017

Keiser-Meyer-Olkin measure reflecting sample adequacy status, is found to be 0.782 while Bartlett's test of Sphericity is significant at 1%. The results in table 7.15 below, identifies two factors based on exploratory factor analysis, which explain 94.62 percent of the cumulative variance.

Table 7.14: KMO and Bartlett's Test in case of Strategic Variables, Nabadwip

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.782
Bartlett's Test of Sphericity	Approx. Chi-Square	241.403
	df	36
	Sig.	0.000

Source: Author Calculation based on Field Survey on 2017

Only two factors appear as latent measures that encompass the effect of the strategic variables. The first factor embraces all the nine strategic components each of which have reasonably high correlation with the factor. This can be termed as diversified strategy. The second factor contains a number of items like improving productivity, increasing capacity utilization, increasing sale in outer locality, automation, diversification strategies, reduction in costs etc. which have loadings i.e. correlation (in absolute value) greater than 0.3 with the factor. This factor can be termed as Business growth. The firms in this region attach great importance to these aspects in terms of their strategic pursuit towards better performance.

Table 7.15: Factor Matrix and Communalities in Case of Strategic Variables, Nabadwip

Strategy Variable	Factor Matrix[a]		Communalities
	Factor 1	Factor 2	
Improving Productivity	.855	-.331	.478
Increasing Capacity Utilisation	.782	-.417	.840
Expanding Capacity	.690		.785
Increasing Sale in Outer Locality	.666	-.403	.606
Improving Quality Standard	.631	.271	.160
Automation	.567	.364	.589
New Job Creation	.399		.472
Diversification Strategies	.517	.567	.455
Reduction in Costs	.486	.498	.485
% of variance	40.51	54.11	

Source: Author Calculation based on Field Survey on 2017

Extraction Method: Principal Axis Factoring. a. 2 factors extracted. 7 iterations required.

Among these variables, increased capacity utilisation, expanding capacity, increasing sale in outer locality as well as automation have high communality value and their variation is well explained by the two factors. Other components excepting 'improving quality standard' also have reasonably high communality value all of which contribute to aspects of business growth.

7.4.3 Canonical Correlation Analysis

The inter-dependence between a set of environmental variables and choice of a set of strategies is represented by considering the canonical correlation analysis. The value of canonical correlation (as depicted in table 7.16) is given by the root of the Eigen value. First coefficient value corresponding to canonical dimension F1 represents the highest interrelation possible between first 2 sets of canonical variables. The interrelation between successive residuals of values is represented by the gradually decreasing values of the canonical correlation coefficient. Here in the present case only six correlation coefficients have relatively higher values (>0.3). Wilk's lambda test as revealed in table 7.17, suggests that first two values of the coefficient are significant at 1 % and 5% significance level respectively. This amply indicates good amount of linear cohesiveness between environmental and

Table 7.16: Canonical Correlations between Environmental and Strategic Factors, Nabadwip

F1	F2	F3	F4	F5	F6	F7	F8	F9
0.811	0.771	0.601	0.565	0.392	0.371	0.279	0.241	0.184

Source: Author Calculation based on Field Survey on 2017

Table 7.17: Wilks' Lamda Test, Nabadwip

Lambda	F	DF1	DF2	Pr > F
0.037	1.724	99	286.4709	0.000
0.108	1.378	80	262.2654	0.032
0.267	0.995	63	237.0224	0.494
0.417	0.854	48	210.7199	0.739
0.613	0.646	35	183.3145	0.937
0.724	0.625	24	154.7077	0.911
0.839	0.544	15	124.6266	0.910
0.910	0.554	8	92	0.813
0.966	0.547	3	47	0.653

Source: Author Calculation based on Field Survey on 2017

strategic factors in case of Nabadwip region. On the whole, transport facility, local govt. attitude as well as rules and regulations promote the activities of the enterprises in the region and accordingly relatively stronger focus is put on strategic aspects like capacity expansion and utilization, promoting sale in outer localities, upgrading their machineries in possible cases etc. The firms located in close proximity also exchange their expertise in cases where deemed required and this helps improve the quality of technology.

7.5 Howrah Foundry Cluster

7.5.1 Analysis of Environmental Aspects

It is said that foundries operating at lower capacity and high operational cost irrespective of its size cannot sustain in highly competitive market. This saving on operational cost is reflected by having better quality raw materials, nearness to market, flexible administrative procedure having a bearing on less transaction cost to acquire permits etc. The business environmental perception of foundry enterprise owners bears testimony to this in terms of relatively higher value of mean ranks assigned to these items. Apart from this, ecological laws, local govt. attitude and level of infrastructure are also put importance in the ranking process. Further more than fifty percent of the entrepreneurs stated their perception towards higher side of mean value in case of items like rules and regulations relating to registration, enforcement of ecological laws, leve;l of infrastructure, administrative procedures for deriving permit, attitude of local govt, competition from substitute product as well as machinery on hire purchase. Environmental /ecological laws govern the functioning of foundry owners. The most important environmental impact of this industry emerges from large volume of sand and solid wastes. The enterprise owners have to obey the statutory requirements in environment protection rules, (1986)in respect of gaseous emission, wastewater discharge, solid waste disposal and noise.

Table 7.18: Mean and Standard Deviation of the Environmental Variables, Howrah

Business Environment Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Access to Finance from Institutional Source	3.33	0.98	43.3	56.7
Attitude of Local Government	3.60	0.76	56.7	43.3
Competition from Substitute Product	3.37	0.87	53.3	46.7
Level of infrastructure (electric power, transportation, communications, etc.)	3.47	1.33	63.3	36.7
Labour Condition	3.03	1.20	46.7	53.3
Machinery on Hire Purchase	3.53	0.85	53.3	46.7
Availability of Raw Materials	4.17	0.64	30.0	70.0
Rules & Regulation Relating to the Registration	4.00	0.77	76.7	23.3
Enforcement of Ecological Laws	3.70	0.90	70.0	30.0
Transport & Marketing	4.10	0.79	33.3	66.7
Administrative procedures (to acquire permits, etc.)	3.80	0.87	56.7	43.3

Source: Author Calculation based on Field Survey on 2017

The significance of factor analysis in the context of perceived environmental variables is presented in the following table. Factor analysis captures the combined influence of a number of co-variables on some latent variable not directly observable. Sampling adequacy based on Keiser-Meyer-Olkin measure is found to be 0.689 and Bartlett's test of Sphericity was significant at 1%. The results in table 7.20 below, identifies 4 factors based on exploratory factor analysis, which explain 63.12 percent of the cumulative variance.

Table 7.19: KMO and Bartlett's Test in case of Environmental Variables, Howrah

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.689
Bartlett's Test of Sphericity	Approx. Chi-Square	133.111
	Df	55
	Sig.	.000

Source: Author Calculation based on Field Survey on 2017

The factor matrix in table 7.20, depicts four factors that reasonably explain the variance. It also shows how much the variable contributes to each factor in terms of communalities. The first factor covers all the variables with their factor loading in absolute sense in all cases being greater than 0.3. It can be considered as overall business environment. In case of 2nd factor only six variables including transport, rules and regulations, machinery, raw materials, competition from substitute product and ecological law have absolute loadings greater than 0.3. This can be termed as input support and legal ambience. Third factor encompasses only three items whole loading in absolute terms are greater than 0.3. These are administrative procedures, labour condition, and competition from substitute production. This can be viewed as external environmental condition. The fourth factor covers rules and regulations, local govt. and access to institutional finance and these constitute the perception about institutional support on the part of the entrepreneurs.

Table7.20: Factor Matrix in Case of Environmental Variables, Howrah

Variables	Factor Matrix			
	1	2	3	4
Transport_Marketing	.820	-.320	-.117	-.180
Administrative_Procedures	.774	-.214	-.371	.229
Labour_Cond	.667	-.194	.361	
Rules_Regulation_Registration	.652	.374	-.261	.319
Local_Govt.	.628			-.316

Machinery	.589	-.361		.108
Raw_Materials	.551	-.326	.262	.255
Access_fin_inst_source	.479		.134	-.450
Underdevelopment_infrastructure	-.316	-.224	.114	
Ecological_Law	.554	.802	-.158	
Competition_Subs_Prod.	.374	.386	.678	.233
% of variance	36.03	12.82	8.5	7.77

Source: Author Calculation based on Field Survey on 2017

7.5.2   Analysis of Strategic Aspects

In order to have increasing access to markets and optimize competitiveness of a foundry enterprise, quality up-gradation, increased productivity, increased sale in outer localities, enhanced capacity utilization and its expansion as well as automation got priorities in the perceived stress on strategic components of the entrepreneurs. New product development as an extension of capacity extension, zero defect manufacturing as an upshot of improved quality standard, expansion of market by tapping outer localities as well as increased energy efficiency in production process reflected in automation etc. are viewed as important elements in strategic apparatus of the foundrymen as revealed in the mean value of ranks. Excepting enhanced capacity utilization and outside market sale, all other components received ranks on the higher side of mean value by more than 50 % of the respondents.

Table 7.21: Mean and Standard Deviation of the Strategic Variables, Howrah

Strategy Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Improving Quality Standard	4.63	0.60	70.0	30.0
Improving Productivity	4.60	0.71	70.0	30.0
Increasing Capacity Utilisation	4.07	0.81	33.3	66.7
Expanding Capacity	4.00	0.93	76.7	23.3
Diversification Strategies	3.73	0.73	70.0	30.0
Reduction in Costs	3.87	0.99	70.0	30.0
New Job Creation	3.77	0.99	70.0	30.0
Automation	3.97	0.87	73.3	26.7
Increasing Sale in Outer Locality	4.13	0.81	36.7	63.3

Source: Author Calculation based on Field Survey on 2017

7.5.3 Canonical Correlation Analysis

The extent of linear interrelationship between a set of environmental components and a set of strategies is derived by considering the canonical correlation analysis. The smaller number of items between environmental and strategic components helps indicate the number of possible canonical correlations. Here since number of items in strategy is nine (which is less than that in environment) there would be nine such correlations. First coefficient value corresponding to canonical dimension F1 represents the highest interrelation possible between first 2 sets of canonical variables. The interrelation between successive residuals of values is represented by the gradually decreasing values of the canonical correlation coefficient. Here in the present case eight correlation coefficients have relatively higher values(>0.3). Wilk's lambda test as revealed in table 7.23, however suggests that only the first.

Table 7.22: Canonical Correlations between Environmental Factors and Strategic Factors, Howrah

F1	F2	F3	F4	F5	F6	F7	F8	F9
0.951	0.854	0.832	0.734	0.619	0.497	0.454	0.323	0.284

Source: Author Calculation based on Field Survey on 2017

Table 7.23 :Wilks' Lambda Test, Howrah

Lambda	F	DF1	DF2	Pr> F
0.001	1.346	99	81.9623	0.082
0.012	0.996	80	78.335	0.507
0.043	0.875	63	73.6929	0.705
0.140	0.696	48	68.0278	0.907
0.303	0.574	35	61.3225	0.961
0.492	0.503	24	53.5388	0.966
0.654	0.495	15	44.5704	0.931
0.823	0.434	8	34	0.892
0.919	0.527	3	18	0.669

Source: Author Calculation based on Field Survey on 2017

value of the coefficient is significant at 10 % . This indicates a moderate degree of linear interdependence between environmental and strategic variables in Howrah cluster. It can be said that foundrymen's support and commitment to innovation and drive to automation, productivity improvement, energy efficiency, quality upgradation, capacity expansion, environmental compliance etc are moderately matched with enforcement of ecological laws, machinery on hire purchase, level of

infrastructure, transport and marketing facility, availability of substitute products etc.

7.6   Shovabazar Hosiery Cluster

7.6.1 Analysis of Environmental Aspects

The table 7.24 below reflects the perception of hosiery entrepreneurs in respect of business environment in Shovabazar region. The firms operating in the city area are highly appreciative of the availability of raw materials and level of infrastructural set-up that back their operation, transport facility of their materials etc. However they did not put much emphasis on labour condition, ecology laws or access to financial facility etc. Excepting components like competition from substitute products, machinery on hire purchase and administrative procedures, in almost all other cases the perception of the majority of enterprise owners were on the higher side of mean value.

Table 7.24: Mean and Standard Deviation of the Environmental Variables, Shovabazar

Environmental Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Access to Finance from Institutional Source	3.63	0.55	60.0	40.0
Attitude of Local Government	3.70	0.59	63.3	36.7
Competition from Substitute Product	4.10	0.60	23.3	76.7
Level of infrastructure (electric power, transportation, communications, etc.)	4.47	0.50	46.7	53.3
Labour Condition	2.73	0.73	56.7	43.3
Machinery on Hire Purchase	4.13	0.67	26.7	73.3
Availability of Raw Materials	4.47	0.50	46.7	53.3
Rules & Regulation Relating to the Registration	3.87	0.56	76.7	23.3
Enforcement of Ecological Laws	3.60	0.80	53.3	46.7
Transport & Marketing	4.60	0.49	60.0	40.0
Administrative procedures (to acquire permits, etc.)	4.37	0.55	40.0	60.0

Source: Author Calculation based on Field Survey on 2018

The following table 7.25 depicts the significance of factor analysis in the context of perceived environmental variables. Sampling adequacy based on Keiser-Meyer-Olkin measure is found to be 0.501 and Bartlett's test of Sphericity was significant at 1%. The results in table below, identifies 4 factors based on exploratory factor analysis, which explain 53.39 percent of the cumulative variance.

Table 7.25: KMO and Bartlett's Test in case of Environmental Variables, Shovabazar

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.501
Bartlett's Test of Sphericity	Approx. Chi-Square	96.051
	df	55
	Sig.	.001

Source: Author Calculation based on Field Survey on 2018

The factor matrix in the following table, depicts four factors that reasonably explain the variance. It also shows how much the variable contributes to each factor in terms of communalities. The first factor covers eight variables with their factor loading greater than 0.3. It can be considered as business facilities In case of 2nd factor only four variables including administrative procedures, raw materials, machinery and ecological laws have absolute loadings greater than 0.3. This can be termed as input support and legal ambience. Third factor encompasses only three items whole loading in absolute terms are greater than 0.3. These are competition from substitute product, ecological law and local govt. This can be viewed as external environmental condition. The fourth factor covers rules and regulations, machinery and local govt. and these can be termed as institutional back-up. on the part of the entrepreneurs.

Communalities represent the explained variance of a variable through a set of factors. In this context, competition from substitute products, administrative procedures, rules and regulations, transport and marketing, machinery, ecological laws, and local govt. appear as significant as a high % (greater than 50 %)of their variance is explained by the 4 factors.

Table 7.26: Factor Matrix in Case of Environmental Variables, Shovabazar

Environmental Variable	Factor Matrix[a]				Communalities
	Factor 1	Factor 2	Factor 3	Factor 4	
Competition Subs Prod	.729		-.606	.223	.953
Administrative Pricedures	.641	-.349		.255	.604
Rules Regulation Registration	.629	-.241	.103	-.451	.667
Transport Marketing	.575	.244	.200	.294	.517
infrastructure	.527	.193	-.107		.328
Access financial institutional source	.483	-.219	-.166	-.241	.367
Labour Condition	.412	.213	.296	.114	.315
Raw Materials	.122	.577	.155	.117	.385
Machinery	.404	.559	.201	-.440	.709
Ecological Law	.293	-.487	.384	-.190	.506
Local Govt	.229	-.213	.497	.419	.521
% of variance	24.245	11.825	9.173	8.148	

Source: Author Calculation based on Field Survey on 2018

7.6.2 Analysis of Strategic Aspects

Increasing quality, productivity promotion of sale in outer regions as well enhanced capacity utilization seem to be perceived rather important strategic components on the part of surveyed entrepreneurs. It is of immense importance if the hosiery manufacturing units become very innovative and keep on producing new designs very frequently and carry on production of upgraded quality products. This is possible if they put focus on adopting automation. Supply of upgraded quality product is an important factor to allure the possible purchasers in international market. Fair trade is very common in international textile market specially for cotton base products. Hosiery manufacture has hardly availed ISO 14000 certification which is specially required when there is pollution. This is European standard wherein supplier needs to comply with quality production norms that discourage use of prohibited chemicals. Most of the hosiery manufacturing units specialize in particular product lines in order to develop competitiveness in those assortments of product. So diversification is hardly put adequate stress in their strategic choices.

Table 7.27: Mean and Standard Deviation of the Strategic Variables, Shovabazar

Strategy Variable	Mean	Standard Deviation	% Greater or Equal to Mean	% Less than Mean
Improving Quality Standard	4.63	0.60	70.0	30.0
Improving Productivity	4.60	0.71	70.0	30.0
Increasing Capacity Utilisation	4.07	0.81	33.3	66.7
Expanding Capacity	4.00	0.93	76.7	23.3
Diversification Strategies	3.73	0.73	70.0	30.0
Reduction in Costs	3.87	0.99	70.0	30.0
New Job Creation	3.77	0.99	70.0	30.0
Automation	3.97	0.87	73.3	26.7
Increasing Sale in Outer Locality	4.13	0.81	36.7	63.3

Source: Author Calculation based on Field Survey on 2018

The following table depicts the significance of factor analysis in the context of perceived strategic variables. Sampling adequacy based on Keiser-Meyer-Olkin measure is found to be 0.697 and Bartlett's test of Sphericity was significant at 1%. Three factors are identified based on exploratory factor analysis, which explain 54.43 percent of the cumulative variance.

Table 7.28: KMO and Bartlett's Test in case of Strategic Variables, Shovabazar

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.697
Bartlett's Test of Sphericity	Approx. Chi-Square	81.121
	df	36
	Sig.	.000

Source: Author Calculation based on Field Survey on 2018

Only three factors appear to encompass the effect of the strategic variables. The first factor embraces all the nine strategic components each of which have reasonably high correlation with the factor. This can be termed as pursuit of diverse strategy. The second factor encompasses a number of items like increasing sale in outer locality, new job creation, reduction in cost, expanding capacity and improving productivity which have loadings i.e. correlation (in absolute value) greater than 0.3 with the factor. This factor can be termed as business growth strategy. Great importance to these aspects is attached by the firms performing in this area. In the third factor there are three components like Improving quality standard, Expanding

capacity and Increasing Capacity Utilisation, together which can be dubbed as extension strategy followed by the enterprises.

Table 7.29: Factor Matrix in Case of Strategic Variables, Shovabazar

Strategy Variable	Factor Matrix[a]			Communalities
	Factor 1	Factor 2	Factor 3	
Automation	.799	.233		.699
Increasing_Sale_in_Outer_Locality	.654	-.414	.101	.609
New_Job_Creation	.651	-.477	-.181	.684
Improving_Quality_Standard	.606	.138	-.443	.582
Diversification_Strategies	.576		.155	.357
Reduction_in_Costs	.560	-.326		.420
Expanding_Capacity	.487	.312	.375	.475
Increasing_Capacity_Utilisation	.476	.180	.438	.450
Improving_Productivity	.461	.591	-.248	.623
% of variance	35.306	11.753	7.38	

Source: Author Calculation based on Field Survey on 2018

Table 7.30: Canonical Correlations between Environmental Factors and Strategic Factors, Shovabazar

F1	F2	F3	F4	F5	F6	F7	F8	F9
0.932	0.776	0.717	0.653	0.611	0.506	0.415	0.313	0.248

Source: Author Calculation based on Field Survey on 2018

The value of canonical correlation (as depicted in table 7.30) is given by the root of the Eigen value. First coefficient value corresponding to canonical dimension F1 represents the highest interrelation possible between first 2 sets of canonical variables. The interrelation between successive residuals of values is represented by the gradually decreasing values of the canonical correlation coefficient. Here in the present case eight correlation coefficients have relatively higher values (> 0.3).

In general it can be said that there is reasonable amount of canonical correlation in each cluster across the sets environmental and strategic variables. Business environmental factors have a bearing on strategic components. Hence the enterprise owners are guided by their perceptions about existing business opportunities and accordingly focus on choice of strategies. In a complex manner motivational issues, relational capital and strategies all have some interweaving impact on their performance.

Chapter Eight
Concluding Observations and Policy Suggestions

8.1   Concluding Observations

Now-a-days in several cases the small industries have proved to be more efficient and productive than their counterparts in big industries. This is largely because of the spirit of flexible specialisation that was ventilated in the clustering model in which several units producing different parts /sub-assemblies of the same or related product co-ordinated or complemented their actions. In fact the model of small industrial development has shown the way to high road/low road economic prosperity in cases where many large units had to be closed down in the event of uncertainty in a globalised regime. However development policies in India have traditionally put focus on individual units in the SSI sector. Cluster development has not been in the agenda of major activity of promotional agencies in the country. But despite that, there has been natural development and flourishing of small industrial clusters in several parts of the country during the last several decades. This has made the policy makers realize the strategic benefit of such an institution. There has been a differential in the tempo of development of different clusters across various regions in India. In this context the study focuses on the formation and flourishing of clusters through entrepreneurial efforts in some selected regions in West Bengal, based on the interaction of motivational factors, relational capital and environmental parameters, which also influence the strategic and entrepreneurial resourcefulness for successful performance.

In the context of highly populated developing countries, this motivation factor assumes great significance. This is because in such countries like India there exists huge scale of unemployment and lack of opportunities for white collar jobs. Hence adopting business/setting up industrial production units happen to be a major avenue for earning for a big chunk of unemployed population. But often there does not exist the appropriate mindset among the youth for taking to these entrepreneurial activities. Hence the analysis and assessment of the motivation factors that drive at least some part of the population to these enterprising occupations, seems extremely

imperative for replication and extension to the society at large. And this assumes special importance specially in case of clustered small and medium scale firms. In this context focus has been put on a comparative analysis of the ranking of various items of motivation as perceived by the respondents in an industrial cluster, analyse the reliability of various items of motivation for assessing their consistency and develop an index of motivation on the basis of principal component technique and find the level of association between motivation index and firm performance level.

On the basis of observing the importance attached to respective motivation items in the firms over the clusters, it came out that some motivation components are assigned higher weightage in majority of the clusters. These have been identified as earning satisfaction from independent work, aspiration for doing independent work, enjoy greater flexibility in personal life, maintaining family legacy as well earning respectable income.

Again it cannot be gainsaid that for the flourishing of business, the firms need to maintain a cordial relation with all the stakeholders who may be directly or indirectly linked with its process of production and disposal of final output. Dealing with the stakeholders in an efficient way helps generate strong bond or relationship which usually proves very effective for the firm to improve the quality of its product, market its output and/or lower the prices in order to remain competitive in the market. Thus the aspects of sharing of technological knowledge, maintaining cordial relation with customers as well as input suppliers, informal relation with firms in cluster, linkage with external bodies, reputation in market and trust are considered to be important factors of relational capital.

The reliability of the instrument used for measuring relational capital indicators is provided by the Cronbach alpha coefficient which reflects the level of internal consistency of the indicators.

In case of fish hook cluster it is observed that there is undercurrent of mutual rivalry and competition across the firms. The lurking desire across the firms to capture a bigger size of the total market and undercut their co-producers in the locality seem to be reflected in a non-cohesive (with other indicators of relational capital) impact on the informal relation of firms in the locality. Further this type of attitude among

the entrepreneurs reinforces sort of poor trust and flexible bonding, stronger version of which are often required to generate a relational capital atmosphere conducive to sustained and vibrant growth in the region.

In case of bell metal cluster in Dharmoda, almost all the firms produce articles of the same type/ use same type of technology. There is neither attached great importance nor it is perceived necessary for sharing of knowledge. However evenness of knowledge leads to competitive spirit and better quality that is reflected in significantly better profitability performance. Again the bell metal firms in this region have a long tradition of enterprise based production. The supply of their output in the market through the chain link of mahajans, clustering of a number of skilled enterprise owners in a small neighbourhood and their earlier link with Moradabad group of firms and inclination to excel their production quality have helped spread their reputation. There has therefore been a favourable perception about the informal relation across the firms in the cluster. Because of geographical proximity to metropolitan market at Calcutta, the locational advantage of the cluster is also considerable.

The firms in the cluster in Nabadwip region, have expressed mutually cordial and good faith relation with other firms within a particular geographical locality.   They are also interested to maintain good relation with the stakeholders in the market. Sharing of technological knowledge, linkage with external market and informal relations within a cluster are given only moderate importance in the perception of the firms.

As the firms in foundry cluster are located in urban setting and the customers and input suppliers are relatively better educated and knowledgeable persons, hence maintaining goodwill and reputation of the business is given premium importance in the ranking of the enterprise owners. Further they value mutual trust and faith reposed in everyday transactions where huge amount of money is involved. This mutual trust and faith is considered as one important aspect of business dealings. Mutually shared technical knowledge, link with external market bodies as well as informal relation maintained across them and their locational advantage are items which are somewhat relegated in their perception.

Hosiery cluster based firms are found to put more importance on maintaining relation with customers and input suppliers, mutually affable and warm relationship with firms in the cluster based on trust and faith. The enterprise owners often remain concerned about how to avoid low trust and faith from fellow producers. Poor working environment, very low wage rate mainly in stitching sector, absence of in-house production facility, non-availability of technical institution for upgradation of product, presence of child labour etc. often interfere with relational capital items and cause no significant impact of these on profitability aspect of the enterprises.

In general maintaining customer repeat rates, stable prices along with good product quality as well as uninterrupted supply of output are some of the factors that contribute to the fostering of good relation with customers. It is suggested from the analysis that identifying areas of relational capital which, if managed and nurtured efficiently and deftly, can make substantial contribution to the performance of firms.

The performance of an enterprise is also governed by its competitive strength, urge and aptitude to adjust and cope with the external environment and internal factors.

Internal factors include actions taken by the enterprise related to its financial condition, owned material resources, relational capital, attitude towards business dealings, its development strategy and methods of management. Again each enterprise works under the influence of the environment beyond its control and tries to adjust its process of operation accordingly. The interactive nature of this relationship is manifested in the fact that the organisation sets relevant products in response to markets needs and undertakes production consistent with prevalent business environment condition.

The competitiveness of the enterprise is derived from its ability to use available resources in the process of acquiring the share of customers and maintaining the goodwill of the organization by fair business dealings with each stakeholder. In an era of increasing competition, while each enterprise must strive hard to maintain its share of customers and amiable market transactions, it also should try to adjust with rising business uncertainty and unrest in the environment by constantly adjusting its

tactics and strategies and the organization must constantly adapt and improve its products.

Quality up-gradation, increased productivity, extension of business to outer localities, expanding capacity and enhanced capacity utilization as well as automation are some of the important priority areas which every enterprise owner should strive for.

8.2 Policy Suggestions

In order to inculcate the motivation and spirits to choose entrepreneurship as a career option, some preliminary steps need to be introduced. It is important to ensure that the individual be nurtured at an early stage through creation of awareness programmes of self-employment and by incorporation of vocational subjects in educational system starting from primary education only. The success stories of eminent entrepreneurs/ industrialists need to be introduced in syllabus in a very attractive manner. Special initiatives need to be undertaken by arranging periodic meetings/interactive sessions of students at secondary/HS level with entrepreneurs for creating awareness and interest and motivating them for choosing this career.

(a) Separate programme is required to generate awareness and interest among the people in general and providing guidelines to the interested individuals for setting up the new business units in particular. There should be adequate infrastructure and advertisement for attracting people to adopt these facilities.

(b) Special programme should be arranged for satisfying the need of different entrepreneurs deficient in certain skills or aligning them with market orientation.

For instance the technician entrepreneur may be at ease to deal with problems relating to production, designing and technology but he face difficulty in the area of market, finance etc. Hence special training arrangements need to be made for these category of entrepreneurs in the area of market, finance etc. Similarly if the entrepreneurs having trading/ business background find difficulty in the area of production and technology, they should be imparted training in the sphere of technology and production.

(c) Separate training arrangements are needed for persons interested in setting up trading/service unit. A special training programme is required to be made and more emphasis should be put to deal with the subject on marketing of service.

(d) Follow up action should be carried out by Institutions/Organizations conducting the entrepreneurship programme. They should have a system or mechanism to monitor the progress of their trainees in all the phases of business life cycle and offer them the needed guidance as and when required.

Despite govt. efforts to streamline various reforms for enticing potential entrepreneurs to start their ventures, there still remain a number of formalities required to be completed by the entrepreneur before processing his loan applications. These formalities need a relook, and should be designed in such a manner that the entrepreneurs may undergo hassle-free stages before the bank can process it at a minimum time after the project has been settled and is brought to operational stage. The loan procedure should be streamlined so that the initiative of the potential entrepreneur be not debarred at the outset for fear of harassment and complex loan sanction processes before undertaking the endeavour to start his enterprise.

The development needs of backward regions can be effectively served by initiating suitable programmes, entrepreneurship training and awareness campaigns by bringing the rural youth under its fold. The special aptitudes, inclinations and potential of these rural people should be identified and accordingly region specific programmes should be launched in coherence with the technical expertise, managerial competence and available local resources. This is likely to contribute to regional rural development potential and satisfy social needs.

A number of economists have in recent times, indicated the possibility of coordination failure of different entrepreneurs to grab perceived profit opportunities. Based on the arguments of Rodrik (2004) and Rodriguez-Clare (2005), it may be stated that this particular type of market failure argument justifies the ushering in of a new industrial policy, the objective of which would be focused on stimulating entrepreneurs to invest in those projects with the highest social return.

In terms of coordination externality argument, translating new business opportunities into reality generates substantial positive externalities for other entrepreneurs. There occurs flow of knowledge and information about the profitability of certain ventures and new entrepreneurial aspirants can act accordingly. When a group of entrepreneurs act in similar line of production, the prospect of profitability, knowledge and technology sharing, the way of access to finance capital and marketing possibilities, often entice other entrepreneurs into the business and individual success gets dependent on mutual actions of market participants. This invokes the shift of focus of a new industrial policy to promotion of clusters instead of individual enterprise.

The existing clusters also however are beset with several problems and need several steps for their steady development.

In case of fish hook cluster (in Borjora), due to lack of alternative skill and apathy to leave their native areas, the existing family based firms face different problems in terms unstable demand for their products, competition from substitutes, poor technology, lack of adequate marketing scope etc. In order to resuscitate the activity of existing firms, there needs to be arranged local training facilities in better technology use, ensure inflow of necessary high quality inputs at reasonable prices, enhance opportunities to have easy access to bank loans, extension of their marketing scope etc. For this purpose the local panchayat can play a lead role by motivating these people not to leave their age old jobs and ensuring better facilities in the aforesaid areas.

Almost all the individual artisans in the bell metal cluster (in Dharmoda region) are dependent over local traders and middle man (Mahajans) having little access to bigger market. So a marketing and sales channel is required to promote the production and profitability base of this cluster. With a broader and direct business interaction with a bigger market, it will help create a sort of brand establishment and add value to the cluster products. Also this would spread the awareness in the market as well as increased demand and trust.

The quality of the products should also be enhanced in order to sell them in more upmarket stores or in metros where they can fetch a better price. Although this Bell

Metal Utensils Cluster's technique is unique to the bell metal work area, there hardly exists any linkages with technical institutions, design schools, and marketing bodies which could uplift the working skill in this craft cluster. Both product and process upgrading should be assigned top priority for the promotion of this craft. Introduction of new innovative and fashionable products and product quality up-gradation should be undertaken in view of changing attitude of buyers and to avoid competition from substitute products. Sheet work can be extended further as an opportunity to develop new range of products like- Jewelery, Mementos, Art Work, Mask, Lamp Shades, Modernized Dining Range, Coasters, etc. The antique finished and toned pattern can be developed in coherence with contemporary tastes/trends.

Traditional techniques need to modernized with better practices & precision, production from moulds could be adopted, Lathe machine needs to be adopted to reduce hard labour; training opportunities in use of precise tools and techniques are needed for promoting the work pace in such cluster.

The business development service providers are not available in Nabadwip Cluster. The operation in the brass-ware cluster is often plagued by the absence of any R & D laboratory, testing facilities, and absence of marketing experts and management services. Two ITI, one Polytechnic, two Engineering Colleges located in this district may provide different services in this respect. Therefore, there is need to have networking and consortium among the stakeholders of the cluster and setting up linkage with development service to the cluster.

During the course of the survey it was found that usually labour intensive technology is followed in the cluster and accordingly jobs like melting, casting, scrapping, welding, grinding are carried out by employing labour. So every firm needs a huge number of labour for their operation. But although the workers are required to carry out their operation for long hours, their skill has not been upgraded to the desired limit. Neither the government nor any organization has taken initiative in past to organize skill development programme in the cluster. Most of the workers are illiterate and also unaware of whatever limited scope may be available. To upgrade the existing skill of workers, exposure to benchmark cluster and their products, skill development training programme needs to be taken up.

Again, due to old traditional and technologically backward process, the weight of the product seems to be high in the Nabadwip cluster than that of Moradabad. So, Moradabad product is quite cheaper than the Nabadwip cluster. This aspect of reduction of weight in products of Nabadwip cluster should be given serious attention.

The accessibility of owners of household based small manufacturing units to bank finance is very poor. Mahajans constitute informal source of credit that are mostly accessed by the enterprise owners. No small manufacturing units reported having taken any loans from commercial banks to meet their credit requirement. So credit facility on easy terms from banking institutions should be promoted.

The coordination among several government organizations like DIC, NABARD, RRB is indeed essential for enabling participation of the entrepreneurs in various fairs, buyers/ sellers meets on regional basis etc.

In case of some firms in foundry cluster (in Howrah region), there is no properly designed logo, posters or packaging for branding the company as well as proper dispatch of end products. In such cases loss of identity and consequent lack of acknowledgement or national recognition of the concerned company and its work output stands in the way of its profitability. Initiative should be taken on the part of such enterprises by approaching some professional to get help in branding and packaging. Common Facility Centre (CFC) in the cluster can also take this initiative. It is not only the products and services, but the product manufacturing processes can also be branded. Now-a-days in business arena, branding has a tremendous role to play. It enhances product recognition and helps in positioning the existing as well as new products among the customers and in the competitive market. Strong brands can generate financial advantages through the concept of 'Brand Equity' in which the brand itself becomes valuable.

Again in some foundry shop floors, a number of workers are involved in frequent bending and lifting heavy objects; in the long run it can result in severe back problem. Many tasks take place through manual handling that occur during pattern and core making, loading furnaces, moulding, fettling, loading, unloading, etc.

Design and implementation of proper training programme for the shop floor workers on better and safe handling of heavy materials is greatly required.

Imparting better training to the workers and application of innovative methods will improve the productivity of workers of the Shovabazar hosiery cluster. Provision of vocational training in local Shovabazar area would help in maintaining the supply of skilled labour. Physical infrastructure and public investment are required for hosiery development. Further there are needed efforts at improving the design and quality of product and make production faster in the hosiery cluster. Here firms work on the subcontracting basis. Value chain marketing and networking system is required to take the product to the suitable market.

In Shovabazar cluster there exist two associations (Bengal Hosiery Association and West Bengal Hosiery Association. There is hardly any coordination between them. For hosiery development, there should is a need of strong coordination between them.

The government needs to encourage new businesses by lowering marginal tax rate and encouraging share ownership among employees. Another useful policy to the hosiery cluster is to provide exemption to new businesses regarding payment of taxes during their first few years (say 3 years) or if they don't cross a minimum revenue during the initial years.

Proper execution of labour rights is not only required but also needs to be promoted through reward structure. In Shovabazar area due to lack of space, the firm owners hesitate to adopt diversification tactics and so they often abstain from installing upgraded machine. The government should make arrangement for developing a hosiery park that might enhance their production base and encourage adoption of diversification strategies.

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Paper Publications

Research Article

Analysis of Motivation Issues and Link with Profitability: Case Study of Entrepreneurial Firms in a Rural Cluster in West Bengal, India

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Abstract

Analysis and assessment of motivation factors of small scale entrepreneurial firms is very important in the context of developing countries where unemployment is at high level. A case study is conducted in the case of fish hook producing small scale clustered firms in West Bengal, India. In this context, a comparative analysis is made of the ranking of various items of motivation as perceived by the respondents in the cluster, reliability of various items of motivation is judged by using Cronbach's Alpha test and an index of motivation is developed on the basis of principal component technique to find the level of association between motivation index and firm performance level. The results reveal reasonable degree of reliability among motivation items, indicate moderate degree of association between motivation index and per-capita firm profitability. Govt. should take certain steps for promoting motivation and attractiveness of entrepreneurial work among young generation.

Keywords: Cronbach's Alpha; Motivation index; Principal component analysis; Regression

Introduction

It is often said that fulfillment of a person's desire to undertake some new venture is influenced by how deeply he likes to be involved in it, his willingness and intention to go ahead and flourish in the business world. Success of the prospective entrepreneur depends on how he copes with the odds and seizes the opportunities that may be coming on the way. Sensing the emerging opportunities and grabbing them at the appropriate time, putting efforts at consolidating the resources and designing the mechanisms for pursuing the goal – all depend on how intensively the entrepreneur feels to follow his course of action and his willingness to play the game. This is linked to factors like traits, attitudes, determination of human agency which can be clubbed under the view of entrepreneurial motivation. Thus Aldrich and Zimmer [1], write, "Entrepreneurial activity can be conceptualized as a function of opportunity structures and motivated entrepreneurs with access to resources".

Plehn-Dujowich [2], states that the decision to start a business is based on two bases: rational and motivational. The rational basis stresses the objective factors (including the environmental conditions) to undertake the task, that support or punish certain behaviors [3] while the motivational basis refers to subjective factors that reflect the decision maker's inclinations and expectations. Further the limitations of rational model (because of lack of information) to predict human behaviour prompted Simon [4] to propose motivation for supplementing the explanations of human behavior: According to his arguments an individual's behaviour is influenced by accepting a priori set of assumptions which are governed by the motivation and impulse to act in a specific manner.

Evidence [5-8], suggests that entrepreneurial motivation matters in shaping firm performance and strategic decision which influence the business outcome. Differences in entrepreneurial motivations also influence the differential in firm performance, entrepreneurs' investments in their firms, the relative success in turning start-up efforts into operative fruitful business venture. The emerging studies in this area as well as existing studies point to the importance of entrepreneurial motivation from the viewpoint of both research and policy initiative.

In the context of highly populated developing countries, this motivation factor assumes great significance. This is because in such countries like India there exists huge scale of unemployment and lack of opportunities for white collar jobs. Hence adopting business/setting up industrial production units happen to be a major avenue for earning for a big chuck of unemployed population. But often there does not exist the appropriate mindset among the youth for taking to these entrepreneurial activities. Hence the analysis and assessment of the motivation factors that drive at least some part of the population to these enterprising occupations, seems extremely imperative for replication and extension to the society at large. And this assumes special importance specially in case of clustered small and medium scale firms. In this context it seems imperative (a) to have a comparative analysis of the ranking of various items of motivation as perceived by the respondents in an industrial cluster (b) to analyse the reliability of various items of motivation for assessing their consistency(c) to develop an index of motivation on the basis of principal component technique and find the level of association between motivation index and firm performance level.

Different Views of Motivation

There are different analytical views on the concept of motivation contributed by different people at different times. For instance Vroom developed the expectancy theory in 1964 pertaining to factory-site motivation. According to expectancy theory, human beings act according to their conscious expectations that a particular behavior will lead to achieve a specific outcome. Three components of Expectancy theory are:

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Inclusive and Sustainable Development

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CONTENTS

Inclusive and Sustainable Development

Mahimkar M.B. and Bhisey R.A., (1995), "Occupational exposure to bidi tobacco increases chromosomal aberrations in tobacco processors", *Mutation Research*, Vol. 334, Pg 39-144.

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9

Relational Capital and Firm Performance: An Analysis in the Context of Clustered Firms in a Rural Region in West Bengal, India

Soumyendra Kishore Datta and Dibyendu Ghosh

INTRODUCTION

Apart from profitability, one of the important motives of entrepreneurial firms is to sustain their business performance in the market economy and survive the spirits of competition, whether perfect or imperfect. This emphasizes the need for continuity or possible expansion in the scale of production, retaining and attracting labour and undertaking investment for maintaining the tempo of expansion, and maintaining price stability through timely supply of quality products. In this context, it cannot be gainsaid that for the flourishing of business, the firms need to maintain a cordial relation with all the stakeholders who may be directly or indirectly linked with its process of production and disposal of final output. Dealing with the stakeholders in an efficient way helps generate strong bond or relationship which usually proves very effective for the firm to improve the quality of its product, market its output and/or lower

Research Article **Open Access**

Role of Relational Capital and Firm Performance: Analysis of a Cluster of Bell-metal Enterprises in a Rural Region in West Bengal, India

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Abstract

This paper has tried to assess the impact of relational capital components on the performance of bell-metal clustered firms in Dharmada region of Nadia district in the State of West Bengal in India. The issue of relational capital has been considered in relation to the notion of intangible asset. Eight components of relational capital indicators were considered and they were combined into a single overall index by using principal component method. A study was conducted on a sample of sixty firms in the cluster. Cronbach's alpha has been used to assess the reliability or internal consistency of the set of individual relational capital indicators. The overall index of relational capital is found strongly associated with profitability performance. The overall regression of profitability figures on individual relational capital indicators has been observed to be significant and some of the indicators are also found to significantly influence firm performance level. The analysis identifies and provides suggestion regarding upgrading and maintaining relational capital components in which the firms may have some advantage. This can make substantial contribution to the performance of firms.

Keywords: Relational capital; Cronbach's alpha; Entrepreneurship; Regression

Introduction

While earning, sustained profit serves as an important driver of a firm's action, maintaining the market share, maximizing sales or even retaining or increasing the customer base often supersedes the profit motive on the part of a firm's conduct. In fact, in this globalized world when spirits of both perfect and imperfect competition, dominate the market economy, apart from usual market conduct, firms try to survive the market uncertainties by taking recourse to subtle behavioral actions that provide competitive edge compared to others. Hence alongside putting efforts towards possible expansion in the scale of production, undertaking investment for maintaining the tempo of expansion, spending on advertisement or innovative works, in order to flourish business firms often feel concerned in maintaining cordial relation with all the stakeholders who may be directly or indirectly linked with its process of production and disposal of final output. Maintaining a sociable and affable relation with all the related stakeholders leads to smoothening of the production channel, enhancement of the market base, and arresting the attention of the potential customers. Enhancing the bonding and good trust relationship with input suppliers, laborer's, customers or even clustered firms in the locality usually proves very effective for the firm to improve the quality of its product, market its output and/or lower the prices in order to remain competitive in the market.

According to Adeeco [1], in the backdrop of a flourishing knowledge economy, it has become easier for competitors to gain access to same technology, develop a similar product, enter the same market by strengthening the access to credit base etc. This enhances the importance of sources of capital for better competitive edge, that are difficult to emulate and replicate and relational capital falls in this category. Relational capital encompasses all the intangible assets generated by developing, maintaining, and nurturing high quality relationships with the external partners that could enhance the firm's performance [2]. Kijek and Kijek [3], emphasized two-fold impacts of relational capital on firms performance namely: cost reduction and increased market value. They opined that knowledge embedded in relationship among employees, customers and suppliers may lead to cost reduction. This may be achieved through process innovations, increased outputs that results in economies of scale.

Carlucci [4] observes that, enhanced investment in relationships with internal and external stakeholder groups for improving performance, usually have multiple effects in the production network. Internal source of relational capital refers to informal bonding with members of the family, relation with business partners or the laborer's who deal with inputs. While external networks in the form of linkages with customers and suppliers, informal relation with firms in a cluster and mutual trust or coordination of their efforts, linkages with external bodies such as local/state Govt., location of the firm as well as reputation or goodwill of the firm-all constitute the external source of relational capital. Young and Snell [5] observed that with enhanced level of relational capital, there emerges greater likelihood of increased production and better efficiency in service delivery.

Andriessen [6], opine that not all businesses can set up relation with their environment and this is mostly the case for newer business ventures which do not have any history and so cannot recognize and manage the relational assets. On the other hand, established firms/entrepreneurs, do not usually falter in comprehending the strength of relational capital due to their long experience in business dealings. In the context of an industrial cluster however, the relatively new firms because of close proximity and coordination with established older firms, are likely to realize early the importance of relational capital. For successful handling of relational capital, firms should recognize that it is a very important component of intangible asset apart from financial and physical assets.

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Analysis of Entrepreneurial Motivation in a Brassware Cluster in a Semi-Urban Region, West Bengal, India

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Abstract

An analysis of motivational aspects is considered important to understand an entrepreneur's mindset and proclivity to undertake some challenging venture and flourish in the business world. In this context, this paper is based on a sample of 60 firms in a brassware cluster in Nabadwip region in West Bengal, India. The objectives are to (a) analyse the rankings of various items of entrepreneurial motivation and focus of their reliability, (b) find a correlation between motivation and profitability indices, and (c) explain the variation in enterprise profitability by the different motivation sub-indices. Cronbach's alpha test is applied for finding the reliability of motivational items. Two-stage principal component technique is used for deriving motivation sub-indices and total motivation index; whereas, the regression analysis explains the variation in enterprise profitability. The findings involve consistency in motivational items, significantly correlated profitability with motivation index, and significant variation in enterprise profitability explained by most of the motivational sub-indices. However, the enterprise owners are facing the problems of credit, marketing, and lack of skilled labour. The government should take measures for providing short-term loan based on their performance. Further, active steps are required for opening some local training schools, arranging workshops, launching awareness generating programmes through drama/posters, etc.

Keywords: Motivation, Entrepreneurship, Cluster, Profitability, Principal Component

Introduction

Motivation is considered the driving force behind an individual's desire and action to undertake a new venture that may be risky and full of challenges. It directs a person's behaviour and attitude to fulfil some desire, goads him to resort to appropriate strategies and jump into action to attain the goals. An entrepreneur's proclivity towards undertaking some innovative work is influenced by his willingness and intention to go ahead and flourish in the business world.

According to Mcfarland (1974), "motivation refers to the way in which urges, drives, desires, striving, aspiration or needs direct, control or explain the behavior of human being".

According to Shane et al. (2003), all entrepreneurial action is the upshot of both motivational and cognitive factors, the latter including ability, intelligence, and skills (Locke, 2000). They also opine that entrepreneurship emerges not only as a result of human action; external factors, e.g., the status of the economy, the availability of venture capital, the actions of competitors, government regulations, etc., also have a substantial role in shaping it. While business environmental factors like these shape the pattern and intensity of entrepreneurial activity, intrinsic factor like human motivation plays a critical role in the entrepreneurial process.

Further, it is argued that motivational differences also shape the entrepreneurial process. Thus, entrepreneurial decision may also be influenced by differences in human

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