"ROLE OF MICRO, SMALL AND MEDIUM ENTERPRISES IN NAGALAND ECONOMY: A CASE STUDY OF THREE TOWNS OF NAGALAND"

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The thesis entitled **"Role of Micro, Small and Medium Enterprises in Nagaland Economy: A Case Study of three towns of Nagaland"** submitted by **Mr. Medongulie Zatsu**, Research Scholar, Department of Economics, Nagaland University: Hqrs; Lumami embodies the results of investigation carried by him under my supervision. It is an original piece of work.

The thesis is fit for submission for the degree of Doctor of Philosophy in Economics.

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Dated: *3rd of May 2018*

Declaration

I, Mr. Medongulie Zatsu, hereby declare that the subject matter of the thesis **"Role of Micro, Small and Medium Enterprises in Nagaland Economy: A Case Study of three towns of Nagaland"** is the record of work done by me, and that the contents of this thesis did not form basis of the award of any previous degree to me or to the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University.

The thesis is submitted to Nagaland University in partial fulfillment for the degree of Doctor of Philosophy in Economics.

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***Dedicated to
My father late Neitsolie Zatsu and
My guardian late Vikielie Zatsu,
whose guidance and love remained forever.***

Acknowledgement

This thesis would be incomplete without mentioning my gratitude to my well wishers.

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Abbreviations

APGR	Annual Percentage Growth Rate
AAGR	Annual Average Growth Rate
CSS	Centrally Sponsored Scheme
CDR	Credit Deposit Ratio
CSO	Central Statistical Organization
CAGR	Compound Annual Growth Rate
CHG	Community Health Centre
DIC	District Industries Centre
GDP	Gross Domestic Product
GSDP	Gross State Domestic Product
GSVA	Gross State Value Added
IIE	Indian Institute of Entrepreneurship
KVIC	Khadi & Village Industries Commission
KWh	Kilowatt hour
MKWH	Mega Kilowatt hour
MSMED	Micro, Small and Medium Enterprises Development
MT	Metric Ton
MU	Million Units
MW	Megawatt
NBSE	Nagaland Board of School Education
NEEPCO	North Eastern Electric Power Corporation Limited
NER	North East Region
NH	National Highways
NHHDC	Nagaland Handloom and Handicrafts Development Corporation
NHL	Nagaland Hotels Limited
NHPC	National Hydroelectric Power Corporation
NI	National Income
NIDC	Nagaland Industrial Development Corporation Ltd.
NIRMSC	Nagaland Industrial Raw Material and Supply Corporation
NKVIB	Nagaland Khadi and Village Industries Board

NMTTC	Nagaland Mini Tool Room and Training Centre
NPPCL	Nagaland Pulp and Paper Corporation Limited
NSDP	Net State Domestic Product
NSMDC	Nagaland State Mineral Development Corporation Ltd.
NSSO	National Sample Survey Organization
NStCB	Nagaland State Co-operative Bank
NTPC	National Thermal Power Corporation Limited
OCED	Organisation for Economic Co-operation and Development
PCI	Per Capita Income
PMEGP	Prime Minister Employment Generation Programme
PWD (R&B)	Public Works Department (Roads & Bridges)
PHCs	Primary Health Centres
RBI	Reserve Bank of India
RRBs	Regional Rural Banks
SBI	State Bank of India
SHC	Sub Health Centre
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
SSIs	Small Scale Industries
UNIDO	United Nations Industrial Development Organisation

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CHAPTER I

INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) is considered the most productive sectors for both the developed and the developing economies. For any economy to have a substantial and sustainable development, all areas of socio-economic and political environment have to be conducive and developed. Over the decades, irrespective of the development process, almost every country is emphasizing the importance of MSMEs and its policies are being augmented for intensive inclusion in their planning processes. This has resulted in the success of MSMEs in most of the countries in achieving economic growth, though problems are inherent in them and needs further improvements and development.

There are different definitions of MSMEs around the world and as such cannot have a universally accepted definition. MSMEs thus, are defined as per the regions or countries operations and conditions. Economies have defined MSMEs in terms of number of employees, investment in plant and machinery, assets, annual turnover or a combination. Mensah (2004) has remarked that MSMEs are dominated by one person, with the owner/manager taking all major decisions. The entrepreneur may possess limited formal education, access to and use of new technology, market information, and access to credit from the banking sector is severely limited; they have weak management skills, thus inhibiting the development of a strategic plan for sustainable growth; they experience extreme working capital volatility; and lack technical know-how and inability to acquire skills and modern technology impede growth opportunities.

The World Bank has defined SMEs as those having 300 maximum numbers of employees; the African Development Bank defined SMEs as having 50 maximum numbers of employees and UNDP 200 employees (Gibson and Vaart, 2008).

The European Union has define of MSMEs as: micro enterprises employ upto 10 persons and either the or balance sheet total of 2 million euro; small enterprises employ upto 50 persons and either the or balance sheet total of 10 million euro and medium enterprises employ upto 250 persons and either the or balance sheet total of not exceeding 50 million euro 0r 43 million euro.

In China, small-sized enterprises are in the category where it employs a maximum of 2000 people and have annual revenue not exceeding RMB 300 million and their total assets not exceeding RMB 400 million. Medium-sized enterprises are those having employment of a minimum 300 people and their annual revenue and total assets not exceeding RMB 30 million to 40 million respectively.

As per the National Industrial Policy Order -2010, Bangladesh has defined MSMEs as: In manufacturing, micro industry/enterprise are enterprises with assets worth Tk 500,000 to 5 million and/or 10 to 24 workers or less. In service industry and in business, micro enterprises are those which employ 10 or fewer people and have assets worth Tk 500,000 or less. In manufacturing, small industry/enterprise are those with assets worth Tk 5 to 100 million and/or 25 to 99 workers. In service industry and in business, small enterprises are those which employ 10 to 25 and have assets worth Tk 500,000 to 10 million. In manufacturing, medium industry/enterprise would be those with assets worth Tk 100 to 300 million and/or 100 to 250 workers. In service industry, medium enterprises are those which employ50 to 100 and have assets worth Tk 10 to 150 million.

In South Africa, as per the National Small Business Amendment Act 26 0f 2003, micro-businesses are defined as five or fewer employees and a turnover of up to R100,000. small businesses employ between 21 and 50 employees with the upper limit for turnover in a small business varies from R1 million in the Agricultural sector to R13 million in the Catering, Accommodations and other trade sectors as well as in the Manufacturing sector, with a maximum of R32 million in the Wholesale Trade sector. Medium-sized businesses are those which employ up to 200 people (100 in the Agricultural sector), and the maximum turnover varies from R5 million in the Agricultural sector to R51 million in the Manufacturing sector and R64 million in the Wholesale Trade, Commercial Agents and Allied Services sector.

The Ghana Statistical Service (GSS) defines small businesses as enterprises that employ less than 10 persons while those that employ more than 10 people are classified as Medium and Large-Sized Enterprises. Alternately, the National Board for Small Scale Industries (NBSSI) in Ghana utilized both the 'fixed asset and number of employees' criteria to define SMEs. According to the NBSSI, enterprises with not more than 9 workers, has plant and machinery (excluding land, buildings and vehicles) and not exceeding 10 million Cedis (US$ 9506, using 1994 exchange rate) are considered as Small Scale Enterprises (Nkuah et al., 2013).

Worldwide, Micro, Small and Medium Enterprises (MSMEs) may be considered as the main agent of economic growth and development. Researchers have found that MSMEs constitute the bulk of total enterprises in most of the economies and are also credited with a higher rate of employment growth. MSMEs and entrepreneurs have boosted many economies like USA and UK, thus authorities have initiated strategic financial and and counselling programmes to support them and that hub of the majority of

world economies are based on the reliance of MSMEs, wich accountsfor a substantial amount of GDP and employment (Fredrick, 2005).

MSMEs should be emphasised to make a sustainable contribution to national income, employment and exports (Kumar and Sardar, 2011). Kanrar (2012) remarked that MSMEs have significantly contributed to economic growth and employment generation. MSMEs also help in achieving the goal of more equitable distribution of the benefits of economic growth and thereby helps alleviate some of the problems associated with uneven income distribution.

Economies have realised the importance of MSMEs and its advantages particularly where regional disparities are higher. However, factors like lack of capital, heavy dependence on agriculture and low capital formation coupled with low propensity to consume have added to the meagerness of MSMEs in developing countries. This has also resulted in market inefficiencies and inelasticities thereby bringing about slow growth rate of MSMEs. There an increasing focus on MSMEs, but lack of proper and adequate finance has defeated the very objective of generation of employment and income. Thus, government, banking and non-banking financial institutions have a great role to play in bringing about the desired shape of the economy through MSMEs.

The importance of MSMEs cannot be overlooked because of its capacity to adapt any economic environment, jobs creation capacity at low capital cost and ability to reduce the extent of poverty in developing economies. MSMEs wide dispersal geographically and its ability to absorb both semi-skilled and unskilled workers has added to its uniqueness. MSMEs have facilitated to the development of human resource by engaging and providing avenues of employees in on-the-job activities which will further help in the expansion of new enterprises.

MSMEs in developing economies can bring about socio-economic impacts which significantly contribute to the overall development of the economy. Plagued with multifaceted problems, developing economies have to rely on MSMEs for sustainable economic development. MSMEs can facilitate the process of growth in developing countries through various schemes and programmes initiated by the government, framing strategic policies and proper implementing, where its full capacity can be harnessed which will go a long way in upholding the pride of MSMEs as the engine and backbone of economic growth.

I: Concept and Status of MSME in India

In India, micro and small industries have contributed appreciably to the economic development of the country. Given its employment pattern, growth, geographical dispersion and contribution to total industrial output, micro-enterprises will continue to play insignificantly in eradicating poverty and in promoting gainful employment. Micro, Small and Medium Enterprises has contributed significantly to economic growth and furthermore, the sector has notably reduced the extent of poverty. There are more than 3.6 million SSI units in the country and these units employ more than 19.3 million people, which is second highest next to agriculture. This sector constitutes 95 percent of the industrial units and contributes 45 percent to the total industrial output of the country and 40 percent of the direct export.

The Industrial policy 1956 has emphasized the encouragement to the village and small-scale enterprises and in Industrial Policy Statement 1977, made the development of small-scale sector the main thrust. Currently, small-scale industries have been defined as those whose investment limit on plant and machinery is Rs. 1 crore and for tiny units is

Rs. 25 lakhs. With effect from October 2, 2006 micro or tiny enterprises cover all enterprises with investment in plant and machinery of less than Rs. 25 lakhs; for small enterprises with investment between Rs. 25 lakhs and Rs. 5 crores; and for medium enterprises with investment between Rs.5 crores and Rs. 10 crores. With the aim to facilitate the growth of small enterprises to grow to medium enterprises, Micro, Small and Medium Enterprises (MSMEs) Development Act, 2006 came into force on October 2, 2006.

In accordance with the provision of Micro, Small and Medium Enterprises Development (MSMED) Act 2006, the Micro, Small and Medium Enterprises (MSMEs) are classified into two classes:

(a) **Manufacturing Enterprises:** The enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the industries (Development and Regulation) Act, 1951. The Manufacturing Enterprises is defined in terms of investment in Plant and Machinery.

(b) **Service Enterprises**: The enterprises engaged in providing or rendering of services and are defined in terms of investment in equipment.

The limit for investment in plant and machinery/ equipment for manufacturing and service enterprises, as on 29-09-2006 are as under:

Manufacturing Sector	
Enterprises	**Investment in plant & machinery**
Micro Enterprises	Does not exceed Rs. 25 Lakhs.
Small Enterprises	More than Rs. 25 Lakhs but does not exceed Rs. 5 crore.
Medium Enterprises	More than Rs. 5 crore but does not exceed Rs. 10 crore.
Service Sector	
Enterprises	**Investment in equipment**
Micro Enterprises	Does not exceed Rs. 10 lakh.
Small Enterprises	More than Rs. 10 lakh does not exceed Rs. 2 crore.
Medium Enterprises	More than Rs. 2 crore but does not exceed Rs. 5 crore.

According to Central Statistical Organisation (C.S.O.) revised series of 1993-94, the entire economy is classified into three sectors in the following manner:

SECTORS	ACTIVITIES

Primary sector	1. Agriculture, Forestry and Fishing
	    1.1. Agriculture
	    1.2. Forestry and Logging
	    1.3. Fishing
	2. Mining and Quarrying

Secondary Sector	3. Manufacturing:
	    3.1. Registered
	    3.2. Unregistered
	4. Electricity, Gas and Water Supply
	5. Construction
	6. Trade, Hotels and Restaurant

Tertiary Sector	7. Transport, Storage and Restaurant
	    7.1. Railways
	    7.2. Transport by other means
	    7.3. Storage
	    7.4. Communication
	8. Financing, Insurance, Real Estate and Business Services
	    8.1. Banking and Insurance
	    8.2. Real Estate, Ownership of Dwellings and Business Services
	9. Community, Social and Personal Services
	    9.1. Public Administration, Defence and Quasi-Government Bodies
	    9.2. Other services

Table I.1: Working Enterprises by Type of Enterprises (in Lakhs)

Registered sector				Unregistered Sector		
Micro	Small	Medium	Total	Micro	Small	Total
14.85 (94.95)	0.76 (4.86)	0.03 (0.19)	15.64	198.39 (99.82)	0.35 (0.18)	198.74

Source: Final Report - Fourth All India Census of Micro, Small & Medium Enterprises 2006-07: Registered Sector and Unregistered Sector
* Figure in parenthesis indicates percentage

As per the Final Report of Fourth All India Census of Micro, Small & Medium Enterprises-2006-07, working enterprises comprises 7.30 percent of registered sector and 92.70 percent unregistered sector. Taking registered sector and unregistered sector together, micro enterprises account for 99.47 percent of the total working enterprises in India, small enterprises and medium enterprises account for only 0.52 percent and 0.01 percent respectively of the total working enterprises. A further break up of enterprises showed that registered sector comprises 94.95 percent, 4.86 percent and 0.19 percent of micro enterprises, small enterprises and medium enterprises respectively, whereas unregistered sector comprises 99.82 percent and 0.18 percent of micro enterprises and small enterprises respectively.

Table I.2: Working Enterprises by Nature of Activity (Number in Lakhs)

Registered sector			
Manufacturing/ Assembly/ Processing	Services	Repairing & Maintenance	Total
10.50 (67.14)	2.62 (16.75)	2.52 (16.11)	15.64
Unregistered Sector			
Manufacturing/ Assembly/ Processing	Services	Repairing & Maintenance	Total
104.5 (52.58)	81.93 (41.22)	12.31 (6.20)	198.74

Source: same as table I.1
* Figure in parenthesis indicates percentage

Table I.2 indicates the nature of activity in the registered sector and unregistered sector and in the registered sector, manufacturing/assembly/processing enterprises comprise 67.14 percent, services enterprises comprise 16.75 percent and repairing and maintenance enterprises comprise 16.11 percent. In the unregistered sector, manufacturing/assembly/ processing enterprises comprise 52.58 percent of, services enterprises comprise 41.22 percent and repairing and maintenance comprises 6.20

percent. Taking together the registered sector and unregistered sector, manufacturing/ assembly/processing enterprises cover 53.64 percent of the working enterprises, services enterprises cover 39.44 percent of the working enterprises and repairing and maintenance enterprises cover 6.92 percent of the working enterprises.

According to the All India Annual Report (MSME) of 2013-14, 31.79 percent of the enterprises are engaged in manufacturing, whereas 68.21 percent of the enterprises are engaged in the services. In the Registered MSME Sector, 67.10 percent of the enterprises are engaged in manufacturing, while 32.90 percent of the enterprises are engaged in the services activities. In the Unregistered MSME Sector, 69.80 percent of the enterprises are engaged in services, while 30.20 percent of the enterprises are engaged in the manufacturing activities.

As shown in table I.3, both in registered sector and unregistered sector, proprietary type of organisation is a dominant one and taken together proprietary accounts for 93.83 percent, Partnership accounts for 1.53 percent, private co-operatives accounts for 0.23 percent, co-operatives accounts for 0.14 percent, 'others' accounts for 1.23 percent and 'Not Recorded' accounts for 3.04 percent. A further break-up of the MSME sector shows that in registered sector 90.09 percent, 4.02 percent, 2.75 percent, 0.51 percent, 0.32 percent and 2.30 percent of the enterprises are under proprietary, partnership, private co-operatives, co-operatives, 'Others' and 'Not Recorded' respectively and in unregistered sector 94.13 percent, 1.33 percent, 0.03 percent, 0.12 percent, 1.30 percent and 3.09 percent of the enterprises are under proprietary, partnership, private co-operatives, co-operatives, 'Others' and 'Not Recorded' respectively.

Table I.3: Working Enterprises by Type of Organisation (in Lakhs)

Registered sector						
Proprietary	Partnership	Private Co.	Co-operatives	Others	NR	**Total**
14.09 (90.09)	0.63 (4.02)	0.43 (2.75)	0.08 (0.51)	0.05 (0.32)	0.36 (2.30)	**15.64**
Unregistered Sector						
Proprietary	Partnership	Private Co.	Co-operatives	Others	NR	**Total**
187.07 (94.13)	2.65 (1.33)	0.06 (0.03)	0.23 (0.12)	2.58 (1.30)	6.15 (3.09)	**198.74**
Total						
Proprietary	Partnership	Private Co.	Co-operatives	Others	NR	**Total**
201.16 (93.83)	3.28 (1.53)	0.49 (0.23)	0.31 (0.14)	2.63 (1.23)	6.51 (3.04)	**214.38**

Source: same as table I.1
* NR= Not Recorded
* Figure in parenthesis indicates percentage

With regard to employment by type of enterprises, employment in registered sector comprises 70.19 percent in micro enterprises, 25.17 percent in small enterprises and 4.64 percent in medium enterprises. In the unregistered sector, employment in micro enterprises account for 99.19 percent and 0.81 percent in small enterprises. Taken together registered and unregistered sectors' employment, micro enterprises account 93.81 for percent of the total employment, small enterprises account for 5.33 percent of the total employment and 0.86 percent in medium enterprises.

A further break up of employment by gender in the registered sector shows that male workers accounted for 79.55 percent and female workers accounted for 20.45 percent. In micro enterprises, male workers accounted for 78.57 percent and 21.43 percent female workers. In small enterprises, male workers comprise 81.35 percent and female workers comprise 18.65 percent. In medium enterprises, male workers constitute 84.49 percent and female workers constitute 15.51 percent. In the unregistered sector, workers comprise of 86.98 percent males and 13.12 percent females. In micro enterprises,

male workers accounted for 87.01 percent and female workers accounted for 12.99 percent. In small enterprises, 83.43 percent are males and female workers constitute 16.57 percent. By taking the employment of the registered sector and unregistered sector together, male workers constitute 74.64 percent of total employment and female workers constitute 25.36 percent of total employment. In micro enterprises, male workers accounted for 77.91 percent of total employment and female workers accounted for 22.09 percent of total employment. In small enterprises, male workers accounted for 26.69 percent of total employment and female workers accounted for 73.31 percent of total employment. In medium enterprises, male workers accounted for 15.51 percent and female workers accounted for 84.49 percent of total employment.

Employment by nature of activity shows that 63.76 percent of employment is engaged in manufacturing, 30.42 percent of employment is engaged in services and 5.82 percent of employment is engaged in repair and maintenance. A further break-up of employment shows that in the registered sector 86.83 percent, 6.75 percent and 6.42 percent of employment are engaged in manufacturing, services and repair and maintenance respectively and in the unregistered sector, 58.51 percent, 35.80 percent and 5.69 percent of employment are engaged in manufacturing, services and repair and maintenance respectively. Likewise, a further break up of employment by gender shows that in manufacturing sector, 82.48 percent of employment are males and 17.52 percent of employment are females; in services sector, 91.35 percent of employment are males and 8.65 percent of employment are females and in repair and maintenance 89.70 percent of employment are males and 10.30 percent of employment are females.

Table I.4: Employment by gender, type of enterprise and nature of activity (No. in Lakhs)

Registered sector							
Gender	Micro	Small	Medium	**Total**	Man.	Ser.	R & M	**Total**
Male	51.34 (78.57)	19.06 (81.35)	3.65 (84.49)	**74.05 (79.55)**	64.34 (79.60)	4.39 (69.90)	5.32 (88.96)	**74.05 (79.55)**
Female	14 (21.43)	4.37 (18.65)	0.67 (15.51)	**19.04 (20.45)**	16.49 (20.40)	1.89 (30.10)	0.66 (11.04)	**19.04 (20.45)**
Total	**65.34 (70.19)**	**23.43 (25.17)**	**4.32 (4.64)**	**93.09**	**80.83 (86.83)**	**6.28 (6.75)**	**5.98 (6.42)**	**93.09**
Unregistered Sector							
Gender	Micro	Small	Medium	**Total**	Man.	Ser.	R & M	**Total**
Male	352.84 (87.01)	2.77 (83.43)	-	**355.61 (86.98)**	199.63 (83.46)	135.08 (92.27)	20.89 (89.85)	**355.6 (86.98)**
Female	52.68 (12.99)	0.55 (16.57)	-	**53.23 (13.12)**	39.57 (16.54)	11.31 (7.73)	2.36 (10.15)	**53.24 (13.02)**
Total	**405.52 (99.19)**	**3.32 (0.81)**	**-**	**408.84**	**239.2 (58.51)**	**146.39 (35.80)**	**23.25 (5.69)**	**408.84**
Total							
Gender	Micro	Small	Medium	**Total**	Man.	Ser.	R & M	**Total**
Male	366.84 (77.91)	7.14 (26.69)	0.67 (15.51)	**374.65 (74.64)**	263.97 (82.48)	139.47 (91.35)	26.22 (89.70)	**429.66 (85.60)**
Female	104.02 (22.09)	19.61 (73.31)	3.65 (84.49)	**127.28 (25.36)**	56.06 (17.52)	13.2 (8.65)	3.01 (10.30)	**72.27 (14.40)**
Total	**470.86 (93.81)**	**26.75 (5.33)**	**4.32 (0.86)**	**501.93**	**320.03 (63.76)**	**152.67 (30.42)**	**29.23 (5.82)**	**501.93**

Source: same as table I.1

*Man= Manufacturing; Ser= Service; R&M= Repair & Maintenance

** Figure in parenthesis indicates percentage

According to the Final Report of Fourth All India Census of MSME (2006-07), in the Registered Sector, micro sector accounts for 94.94 percent of the total working enterprises of MSME sector, small sector accounts for 4.89 percent and medium sector accounts for 0.17 percent of the working enterprises of MSME sector. In the Unregistered MSME sector, micro sector accounts for 99.83 percent of enterprises and small sector accounts for 0.17 percent of the working enterprises. In terms of gross output

contribution, micro enterprises contribute 44.24 percent, small enterprises contribute 45.06 percent and medium enterprises contribute 10.71 percent of total output.

Results from the All India Annual Reports (MSMEs) 2013-14 shows that 94.41 percent of the enterprises in the sector are proprietary enterprises. About 1.18 percent of the enterprises are run by partnerships and 0.14 percent of the enterprises are run by private companies. The rest are owned by co-operatives/ trusts or others. Among the registered MSME sector, 90.08 percent of the enterprises are proprietary enterprises. About 4.01 percent of the enterprises are run by partnerships and 2.78 percent of the enterprises are run by private companies. The rest are owned by co-operatives/ trusts or others. In the unregistered MSME sector, 94.61 percent of the enterprises are proprietary enterprises. About 1.06 percent of the enterprises are run by partnerships and 0.02 percent of the enterprises are run by others. The rest are owned by co-operatives/ trusts or others. This reveals that sole proprietor is a dominant form of organisation in the Indian economy. Sole proprietorship plays a vital role in providing opportunities to start an enterprise to their capabilities and resources to their advantages. The structure of organisational set-up indicates that sole proprietary is a major force in furthering the pace of the growth of enterprises.

As per the Final Report of Fourth All India Census of Micro, Small and Medium Enterprises (2006-07), in the Registered Sector, male ownership constitutes 86.28 percent of enterprises as compared to 13.72 percent owned by females. A further break-up into micro, small and medium enterprises also reveals that there is dominance of male ownership where 85.81 percent, 94.94 percent and 95.79 percent of the enterprises are owned by males in micro, small and medium enterprises respectively and the rest 14.19 percent, 5.06 percent and 4.21 percent of the enterprises are owned by females

respectively. In the Unregistered MSME Sector for the same period, males own 90.44 percent of enterprises as compared to 9.09 percent owned by females and 0.47 percent enterprises showed missing ownership. In sector-wise, 90.43 percent of enterprises are owned by males in the micro segment while in the small segment, 96.81 percent of enterprises are owned by males.

India has given due importance for the development of small scale industries and has witness the different industrial policy resolutions (IPR) like IPR 1948, IPR 1956, IPR 1977, IPR 1980, IPR 1990 and IPR 1991 and in 2006 MSME Development Act came into existence. The main objective of MSMED Act 2006 is for facilitating the promotion and development and enhancing the competitiveness of micro, small and medium enterprises and for matters connected therewith or incidental thereof. The other features of Act include establishment of specific funds, for the promotion, development and enhancement of competitiveness of these enterprises; notification of schemes/programmes for the purpose; progressive credit policies and practices; preference in Government procurements to products and services of the micro and small enterprises; introducing most effective mechanisms for mitigating the problems of delayed payments to micro and small enterprises and simplification of the process of closure of business by all three categories of enterprise.

Khadi and Village Industries Commission (KVIC) set-up by Khadi and Village Industries Commission (KVIC) Act, 1956 is a statutory organization and the main objective is to promote khadi and village industries for providing employment opportunities in rural areas. The government in 2006 has amended the Khadi and Village Industries Commission Act, 1956 introducing several new features like training,

marketing, funding, economic research, Rural Employment Generation Programme (REGP), etc. to facilitate professionalism in the operations of the Commission as well as field level formal and structured consultations with all segments of stakeholders.

The Ministry of Micro, Small and Medium Enterprises, GOI and Small Industries Development Bank of India (SIDBI), established a Trust named Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) for implementing the Credit Guarantee Fund Scheme for Micro and Small Enterprises.

The Ministry of Micro, Small and Medium Enterprises launched a scheme in October-2000 namely "Credit Linked Capital Subsidy Scheme (CLCSS) for technology upgradation of Micro and Small Enterprises. The scheme was revised from 29.9.2005 and aims at facilitating technology upgradation of Micro and Small Enterprises (MSEs) by providing 15 percent of capital subsidy (limited to maximum Rs.15 lakhs) for procuring Plant & Machinery.

The National Institute for Entrepreneurship and Small Business Development (NIESBUD), a premier organisation of the Ministry of Skill Development and Entrepreneurship is engaged in training, consultancy, research, etc. in order to promote entrepreneurship. The major activities of the Institute are Training of Trainers, Management Development Programmes, Entrepreneurship-cum-Skill Development Programmes, Entrepreneurship Development Programmes and Cluster Intervention.

A "Package for Promotion of Micro and Small Enterprises" was announced in February 2007. This includes measures addressing concerns of credit, fiscal support cluster-based development, infrastructure, technology and marketing. Capacity building of MSME Associations and support to women entrepreneurs are the other important features of this package. Recently in January 2017, the Central Government has approved

a package for providing support to the small and micro enterprises (SMEs) across the country. This package would entail the augmentation of the corpus under the Credit Guarantee Fund for the SMEs ventures and also aim to double the coverage of the loans under the Credit Guarantee Scheme.

The Government has announced formulation of National Competitiveness Programme in 2005 with an objective to support the Small and Medium Enterprises (SMEs) in their endeavour to become competitive and adjust the competitive pressure caused by liberalization and moderation of tariff rates.

Make in India, launched in 25th September 2014, has the primary objective of making India a global manufacturing hub, by encouraging both multinational as well as domestic companies to manufacture their products within the country. It seeks to facilitate job creation, foster innovation, enhance skill development and protect intellectual property.

The North Eastern Development Finance Corporation Ltd (NEDFi) which is a public limited company was established under Companies Act 1956. NEDFi came into existence in 9th August 1995, with the objective to provide financial assistance to micro, small, medium and large scale enterprises for setting up industrial infrastructure and agri-allied projects in the region. Recently "North-East Venture Fund" had been set up by Minister for Development of North-Eastern Region (DoNER) and North Eastern Development Finance Corporation Ltd (NEDFi), which already has the mandate to encourage entrepreneurship in the region, primarily by offering support to the first-generation entrepreneurs. In addition, the NEDFi also performs the role of hand-holding and capacity building.

North Eastern Region Vision 2020 focuses on the development of agro and allied activities, promotion of horticulture and floriculture as well as medicinal and aromatic plants and herbs, plantation of commercial crops, promotion of animal husbandry, fisheries, dairying and birds life, promotion of fodder cultivation, development of agricultural link roads, agricultural credit systems, improvement of cold storage facilities, development of handloom and handicrafts for employment and income generation, development of human resources, etc.

II: MSMEs in North Eastern Region

The growth rate of Small-Scale Industries in the North Eastern Region (NER) is very slow and is far from encouraging. There is virtually no attempt for industrial development in the region during the first three five year plans. Perhaps, it is only during the fourth five-year plan period that initiatives were made to set up industries in NER and accordingly, the growth of this sector in the region gained momentum. Though the development pattern of the Small-Scale Industries is far from satisfactory, there is enough evidence that the NER started on a positive note. In order to improve the status of Small-Scale Industries of the Region, the Ministry of Small Scale Industry, Government of India entrusted the Indian Institute of Entrepreneurship (IIE) to undertake the study on the status of SSI of the region recently. The study found out that there are more than 71,395 SSI units in the NE Region as on March 2003, which is only 2 percent of the total SSI units in the country. The study found that the SSI units face problems in four areas, Project identification, Implementation, Production/Operation and Marketing. The study has identified specific problems in four areas and suggestions regarding the type of support required have been recommended. The role played by various existing

promotional and support organization in NE for promotion of SSI was looked into. Gaps in the support structure have been identified and suggestions for plugging the gaps have been given. The study also attempted to look into the prospects of Small Scale Industries growth by taking up the following areas, the rich and natural resources and diverse agro-horticultural products, the existing and prospective clusters of the Region and the traditional skill of the people of the Region.

A positive progress for the Small-Scale sector can become visible only if a uninterrupted and comprehensive support is provided to the existing SSIs and the emerging ones. Given the backdrop of the status of Small Scale industries and taking into consideration the challenges that they face, various interventions are needed for growth of Small Scale Industries. The study has come with a number of recommendations with specific roles suggested for the financial institutions both banking and non-banking financial institutions, state governments and central government.

Table I.5: Working Enterprises by Status of Operation in NER Registered Sector

NER States	Working	Closed & Non-traceable	Total
Arunachal Pradesh	417 (67.80)	198 (32.20)	615
Assam	19,864 (65.47)	10475 (34.53)	30,339
Manipur	4,492 (82.86)	929 (17.14)	5,421
Meghalaya	3,010 (72.67)	1132 (27.33)	4,142
Mizoram	3,715 (74.61)	1264 (25.39)	4,979
Nagaland	1,332 (35.74)	2395 (64.26)	3,727
Sikkim	122 (58.65)	86 (41.35)	208
Tripura	1,343 (70.50)	562 (29.50)	1,905
NER Total	**34,295 (66.80)**	**17041 (33.20)**	**51,336**

Source: Final Report - Fourth All India Census of Micro, Small & Medium Enterprises 2006-07: Registered Sector and Unregistered Sector
* Figure in parenthesis indicates percentage

The percentage distribution of working and non-working enterprises in NER shows that 66.80 percent are working and the remaining 33.20 percent are either closed

on non-traceable. Among the NER states, Manipur has the highest working enterprises at 82.86 percent followed by Meghalaya. The least performing state is Nagaland with only 35.74 percent working enterprises. Assam has the highest number of enterprises constituting 59.10 percent of the entire north-east region's enterprises followed by Mizoram.

Table I.6: Working Enterprises by Type of Enterprises in NER Registered Sector

NER States	Micro	Small	Medium	Total
Arunachal Pradesh	399 (95.68)	16 (3.84)	2 (0.48)	417 (1.2)
Assam	19,238 (96.85)	599 (3.01)	27 (0.14)	19,864 (57.9)
Manipur	4,480 (99.73)	12 (0.27)	0 (0)	4,492 (13.1)
Meghalaya	2,972 (98.74)	37 (1.23)	1 (0.03)	3,010 (8.8)
Mizoram	3,663 (98.60)	51 (1.37)	1 (0.03)	3,715 (10.8)
Nagaland	1,298 (97.45)	33 (2.48)	1 (0.03)	1,332 (3.9)
Sikkim	110 (90.16)	12 (9.84)	0 (0)	122 (0.4)
Tripura	1,296 (96.50)	43 (3.20)	4 (0.30)	1,343 (3.9)
NER Total	**33,456 (97.55)**	**803 (2.34)**	**36 (0.11)**	**34,295**

Source: same as table I.5
* Figure in parenthesis indicates percentage

As shown in table I.6, in the registered sector, micro enterprises account for the bulk of enterprises with 97.55 percent while small and medium enterprises account for 2.34 percent and 0.11 percent respectively. Micro enterprises in all NER states account for more than 90 percent and in Manipur at 99.73 percent, Meghalaya at 98.74 percent and Mizoram at 98.60 percent, it is higher than the micro enterprises' percentage of NER total which is 97.55 percent. In small enterprises, Sikkim, Arunachal Pradesh, Assam, Tripura and Nagaland are higher than the small enterprises' percentage of NER total which is 2.34 percent. In medium enterprises, Arunachal Pradesh, Tripura and Assam are higher than the medium enterprises' percentage of NER total which is 0.11 percent.

Among the states, Assam accounted for 57.50 percent of micro enterprises followed by Manipur; in small enterprises, Assam accounted for 74.60 percent followed by Mizoram; and in medium enterprises, Assam accounted for 75 percent and is followed by Arunachal Pradesh.

Table I.7: Working Enterprises by Type of Enterprises in NER Unregistered Sector

NER States	Micro (in lakhs)	Total (in lakhs)
Arunachal Pradesh	0.25 (6.45)	0.25 (6.4)
Assam	2.14 (55.15)	2.14 (55.2)
Manipur	0.44 (11.34)	0.44 (11.3)
Meghalaya	0.47 (12.11)	0.47 (12.1)
Mizoram	0.1 (2.58)	0.1 (2.6)
Nagaland	0.16 (4.12)	0.16 (4.1)
Sikkim	0.06 (1.55)	0.06 (1.5)
Tripura	0.26 (6.70)	0.26 (6.7)
NER Total	**3.88**	**3.88**

Source: same as table I.5
* Figure in parenthesis indicates percentage

In the unregistered sector, there are only micro enterprises in the NER and Assam accounts for 55.15 percent of the NER total, followed by Meghalaya at 12.11 percent and Manipur at 11.34 percent. Sikkim has the least number of enterprises with 1.55 percent of the NER total enterprises.

The distribution of enterprises by nature of activity in the registered sector shows that all the NER states enterprises are highly concentrated in manufacturing/ assembly/processing which ranges from 68 percent to 96 percent whereas enterprises in services and repairing & maintenance ranges 4 percent to 32 percent. The NER total shows that 72.96 percent of enterprises are engaged in manufacturing/assembly/

processing enterprises, 14.66 percent of enterprises are engaged in service enterprises and 12.38 percent of enterprises are engaged in repairing & maintenance enterprises.

Table I.8: Working Enterprises by Nature of Activity in NER Registered Sector

NER States	Manufacturing/ Assembly/ Processing	Services	Repairing & Maintenance	Total
Arunachal Pradesh	360 (86.33)	15 (3.60)	42 (10.07)	417
Assam	13,421 (67.57)	3,636 (18.30)	2,807 (14.13)	19,864
Manipur	3,587 (79.85)	268 (5.97)	637 (14.18)	4,492
Meghalaya	2,270 (75.42)	562 (18.67)	178 (5.91)	3,010
Mizoram	2,873 (77.33)	435 (11.71)	407 (10.96)	3,715
Nagaland	1,273 (95.57)	18 (1.35)	41 (3.08)	1,332
Sikkim	105 (86.06)	11 (9.02)	6 (4.92)	122
Tripura	1,132 (84.29)	84 (6.25)	127 (9.46)	1,343
NER Total	**25,021 (72.96)**	**5,029 (14.66)**	**4,245 (12.38)**	**34,295**

Source: same as table I.5
* Figure in parenthesis indicates percentage

In Arunachal Pradesh, 86.33 percent of enterprises are engaged in manufacturing/ assembly/ processing enterprises, 3.60 percent of enterprises are engaged in service enterprises and 10.07 percent of enterprises are engaged in repairing & maintenance enterprises.

In Assam, 67.57 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises, 18.30 percent of enterprises are engaged in service enterprises and 14.13 percent of enterprises are engaged in repairing & maintenance enterprises.

In Manipur, 79.85 percent of enterprises are engaged in manufacturing/ assembly/processing enterprises, 5.97 percent of enterprises are engaged in service

enterprises and 14.18 percent of enterprises are engaged in repairing & maintenance enterprises.

In Meghalaya, 75.42 percent of enterprises are engaged in manufacturing/ assembly/processing enterprises, 18.67 percent of enterprises are engaged in service enterprises and 5.91 percent of enterprises are engaged in repairing & maintenance enterprises.

In Mizoram, 77.33 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises, 11.71 percent of enterprises are engaged in service enterprises and 10.96 percent of enterprises are engaged in repairing & maintenance enterprises.

In Nagaland, 95.57 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises, 1.35 percent of enterprises are engaged in service enterprises and 3.08 percent of enterprises are engaged in repairing & maintenance enterprises.

In Sikkim, 86.06 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises, 9.02 percent of enterprises are engaged in service enterprises and 4.92 percent of enterprises are engaged in repairing & maintenance enterprises.

In Tripura, 84.29 percent of enterprises are engaged in manufacturing/ assembly/processing enterprises, 6.25 percent of enterprises are engaged in service enterprises and 9.46 percent of enterprises are engaged in repairing & maintenance enterprises.

A further break up shows that in manufacturing/assembly/processing enterprises, Assam accounts for 53.64 percent and is followed by Manipur at 14.34 percent and Mizoram at 11.48 percent. In service enterprises, Assam accounts for 72.30 percent and is followed by Meghalaya at 11.17 percent and Mizoram at 8.65 percent. In repairing &

maintenance enterprises, Assam accounts for 66.12 percent and is followed by Manipur at 15.01 percent and Mizoram at 9.59 percent.

The distribution of enterprises by nature of activity in the unregistered sector shows that 57.99 percent of enterprises are engaged in manufacturing/assembly/processing enterprises, 38.66 percent of enterprises are engaged in service enterprises and 3.35 percent of enterprises are engaged in repairing & maintenance enterprises (table I.9).

Table I.9: Distribution of Working Enterprises by Nature of Activity in NER Unregistered Sector

NER States	Manufacturing/ Assembly/ Processing	Services	Repairing & Maintenance	Total
Arunachal Pradesh	0.15 (60)	0.09 (36)	0.01 (4)	0.25
Assam	1.14 (53.27)	0.93 (43.46)	0.07 (3.27)	2.14
Manipur	0.27 (61.37)	0.16 (36.36)	0.01 (2.27)	0.44
Meghalaya	0.33 (70.21)	0.13 (27.66)	0.01 (2.13)	0.47
Mizoram	0.07 (77.78)	0.02 (22.22)	0 (0)	0.09
Nagaland	0.16 (100)	0 (0)	0 (0)	0.16
Sikkim	0.02 (33.33)	0.04 (66.67)	0 (0)	0.06
Tripura	0.11 (40.74)	0.13 (48.15)	0.03 (11.11)	0.27
NER Total	**2.25 (57.99)**	**1.5 (38.66)**	**0.13 (3.35)**	**3.88**

Source: same as table I.5
* Figure in parenthesis indicates percentage

In Arunachal Pradesh, 60 percent of enterprises are engaged in manufacturing/assembly/processing enterprises, 36 percent of enterprises are engaged in service enterprises and 4 percent of enterprises are engaged in repairing & maintenance enterprises.

In Assam, 53.27 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises, 43.46 percent of enterprises are engaged in service enterprises and 3.27 percent of enterprises are engaged in repairing & maintenance enterprises.

In Manipur, 61.37 percent of enterprises are engaged in manufacturing/ assembly/processing enterprises, 36.36 percent of enterprises are engaged in service enterprises and 2.27 percent of enterprises are engaged in repairing & maintenance enterprises.

In Meghalaya, 70.21 percent of enterprises are engaged in manufacturing/ assembly/ processing enterprises, 27.66 percent of enterprises are engaged in service enterprises and 2.13 percent of enterprises are engaged in repairing & maintenance enterprises.

In Mizoram, 77.78 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises and 22.22 percent of enterprises are engaged in service enterprises.

In Nagaland, all enterprises are engaged in manufacturing/assembly/ processing enterprises.

In Sikkim, 33.33 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises and 66.67 percent of enterprises are engaged in service enterprises.

In Tripura, 40.74 percent of enterprises are engaged in manufacturing/assembly/ processing enterprises, 48.15 percent of enterprises are engaged in service enterprises and 11.11 percent are engaged in repairing & maintenance enterprises.

A further break up shows that among the states in manufacturing/assembly/ processing enterprises, Assam accounts for 50.67 percent and is followed by Meghalaya at 14.67 percent and Manipur at 12 percent. In service enterprises, Assam accounts for 62 percent and is followed by Manipur at 10.66 percent and Meghalaya at 8.67 percent. In

repairing & maintenance enterprises, Assam accounts for 53.85 percent and is followed by Tripura at 23.08 percent.

III: MSMEs in Nagaland

According to the Small-Scale Industries census report 2001, there were 1114 registered small-scale industries and 109 unregistered small-scale industries. Out of the available registered small-scale industries, only 47.94 percent of the SSI units are in working condition that is to say that as high as 580 small-scale industries units have closed down. In the working units, total employment generated was 4803 with an average of 9 workers per unit and for unregistered SSI units; employment generated was 520 with an average of 6 workers per unit. Total fixed investment for the registered small-scale industries was Rs. 4146.16 lakhs and for the unregistered, it was Rs. 262.8 Lakhs with an average investment of Rs. 7.76 lakhs and Rs. 2.41 lakhs respectively. The total gross output was Rs. 9580 lakhs for registered small-scale industries and Rs. 192.2 lakhs for unregistered small-scale industries, with an average output of Rs. 17.94 lakhs and Rs. 1.76 Lakhs per unit respectively.

Entrepreneur Memorandum Part-II (EM-II) came into effect with the implementation of MSMED Act, 2006. As per the Act's provision, the filing of EM-II is discretionary in nature.

Table I.10: Number of EM Part-II Regd. (MSMEs) and Employment in Nagaland

Year	Registered units	Cumulative	Employment	Cumulative	Employment per unit
2006-07	717	717	13452	13452	18.76
2007-08	704	1421	13150	26602	18.68
2008-09	717	2138	4302	30904	6
2009-10	704	2842	4224	35128	6
2010-11	2062	4904	12192	47256	5.91
2011-12	1092	5996	6444	53700	5.9
2012-13	760	6756	3360	57060	4.42
2013-14	126	6882	1733	58793	13.75
2014-15	78	6960	506	59299	6.49

Source: Statistical handbooks of Nagaland

Table I.10 shows that from 2006-07 to 2014-2015 a total of 6960 units were registered under EM Part-II Regd (MSMEs) employing 59299 persons with an average employment of 9.55 per unit. During 2006-07, registered units increased to a high of 2062 units but 2010-11, it decreased to as low as 78 units. Similarly in terms of employment during 2014-15 it was the lowest with 506 which was 13452 during 2006-07.

Fig 1.1: Registered units and employment in MSME

Fig 1.2:Registered units and employment in MSME
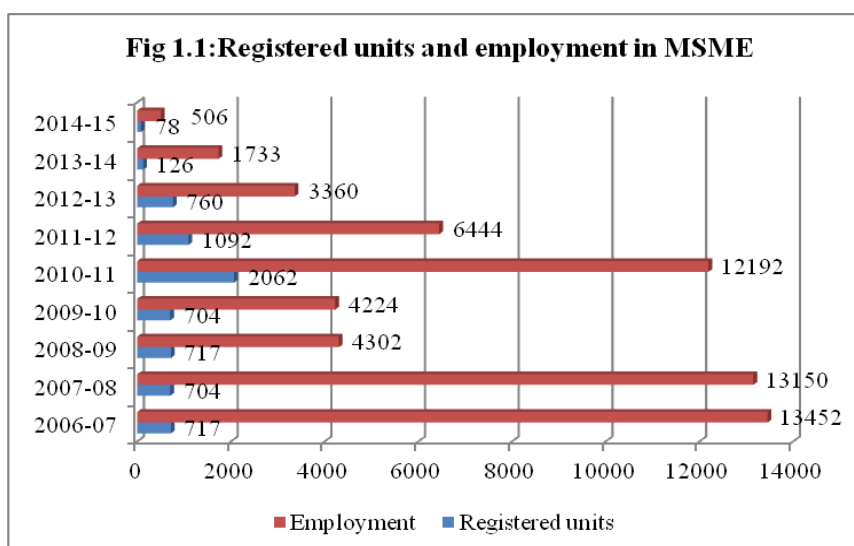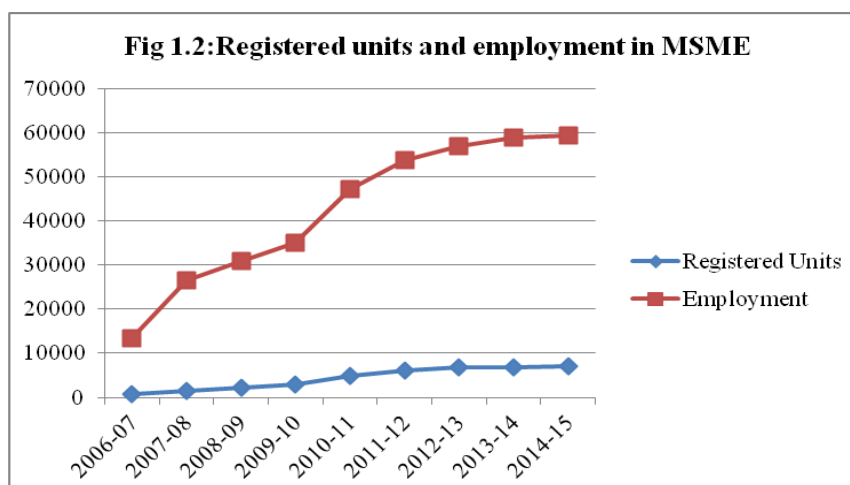
Data on registered units shows that during 2014-15 out of the eleven district, there are 78 registered units in the four districts viz, Mokokchung, Dimapur, Kohima and Peren. During this period, manufacturing of Food Products & Beverages accounted for 14 percent of MSMEs total and Mokokchung and Dimapur have 3 units each accounted for 27 percent each. Kohima and Peren accounted for 37 percent and 9 percent of manufacturing of Food Products & Beverages respectively. Manufacturing of weaving apparel accounted for 8 percent of MSMEs total and Dimapur and Kohima accounted for 33 percent and 67 percent respectively. Moreover, for the given period, Dimapur is the only district manufacturing of Wood & Wood Products except for Furniture, Publishing, Printing & Reproduction of Recorded Media and manufacturing Other Non-metallic products. Manufacturing of Fabricated Metal Products accounted for 23 percent of the state's total MSME where Dimapur accounted for 72 percent and 22 percent and 6 percent are in Kohima and Peren respectively. Manufacturing of furniture accounted for 18 percent of the state's total where the bulk of the units are in Dimapur with 57 percent followed by Kohima with 29 percent. Dimapur and Kohima constitute 33 percent and 67 percent respectively of Maintenance & Repair of Motor Vehicles & Motor Cycles. For

Other Business Activities, Mokokchung has 17 percent and the rest 83 percent are in Dimapur. Furthermore, Other Services Activities accounted for 19 percent of the state's total and Dimapur accounted for 63 percent followed by Kohima with 24 percent and Mokokchung accounted for 9 percent while Peren accounted for 4 percent of Other Services Activities.

Table I.11: Growth rate of number of EM-II filed

Year	Micro enterprise	Small enterprise	Medium enterprise	Total	Growth rate (%)
2007-08	598 (87.04)	89 (12.96)	-	687	-
2008-09	2168 (86.79)	325 (13.01)	5 (0.20)	2,498	263.61
2009-10	1065 (73.70)	377 (26.09)	3 (0.21)	1,445	-42.15
2010-11	213 (98.16)	4 (1.84)	-	217	-84.98
2011-12	211 (99.06)	2 (0.94)	-	213	-1.84
2012-13	230 (99.57)	1 (0.43)	-	231	8.45
2013-14	236 (97.52)	5 (2.07)	1 (0.41)	242	4.76
2014-15	88 (96.70)	3 (3.30)	-	91	-62.40

Source: Entrepreneurs Memorandum (Part-II) Data on MSME Sector, Development Commissioner, Ministry of Micro, Small and Medium Enterprises, GOI

Table I.11 shows that from 2007-08 to 2008-09, the annual growth rate was 263.61 percent and thereafter for three consecutive years till 2011-12 there was a negative growth rate of EM-II filed. Again in 2012-13 there was a positive growth rate of 8.45 percent which in 2013-14 decreased to 4.76 percent but in 2014-15 there is a negative annual growth rate of -62.40 percent.

Table I.12: No. of Trade wise EM-Part II Registered (MSME) during 2014-15

Sl. No	Particulars	Mkg	Dmp	Kma	Peren	Total
1	Mfg. of Food Products & Beverages	3 (27)	3 (27)	4 (37)	1 (9)	11(14)
2	Mfg. of Weaving Apparel	-	2 (33)	4 (67)	-	6 (8)
3	Mfg. of Wood & Wood Products except Furniture	-	1(100)	-	-	1 (1)
4	Publishing, Printing & Reproduction of Recorded Media	-	2 (100)	-	-	2 (3)
5	Mfg. of Other Non-metallic	-	2 (100)	-	-	2 (3)
6	Mfg. of Fabricated Metal Products	-	13 (72)	4 (22)	1(6)	18 (23)
7	Mfg. of Furniture	1 (7)	8 (57)	4 (29)	1 (7)	14 (18)
8	Maintenance & Repair of Motor Vehicles & Motor Cycles	-	1 (33)	2 (67)	-	3 (4)
9	Other Business Activities	1(17)	5 (83)	-	-	6 (7)
10	Other Services Activities	2 (13)	12 (80)	1 (7)	-	15 (19)
Total		7 (9)	49 (63)	19(24)	3 (4)	78

Source: Statistical Handbook, 2015

* Mkg = Mokokchung, Dma = Dimapur, Kma = Kohima

In Nagaland, MSMEs is playing a very important role in providing job opportunities and as on March 2007, in both the registered and unregistered sectors, male workers are much higher than the female workers where male workers constituted 72.72 percent and 82.25 percent in rural area and urban area respectively as against 27.28 percent and 17.75 percent of female workers in rural area and urban area respectively in the registered sector. In the unregistered sector, both in the rural and urban areas, female workers are slightly higher than the registered sector.

Nagaland has made considerable progress in developing and determining the status of Micro, Small and Medium Scale Enterprises. The Industrial Mission of Nagaland is "to facilitate rapid and sustained industrial development in the state through enhanced investment, an investor-friendly environment, provision for infrastructure and

institutional support, attractive incentive package and optimum utilisation of existing resources in order to gainfully exploit emerging opportunities in the national and international markets and generate substantial income and employment avenues for the people of Nagaland".

IV: Literature Review

Many studies have been carried from time to time on different aspects of micro, small and medium enterprises. Some review are presented below-

IV.1 MSME on Growth and development

The significance of MSMEs has been considered worldwide as the engine of growth and as such factors affecting its growth and development have been a concern of governments, academicians and so on. Advani (1997) summarised that SME sector is a major source of potential employment in low-income economies and as such SMEs are capable of attainment of growth objectives in developing nations. Syed et al. (2012) in their case studies found that SMEs are playing a very major role in the economy of Pakistan, SMEs are the major source of foreign exchange earnings and SMEs have a major contribution in Pakistan. Ali et al. (2014) also found that small-scale enterprises play a very important role in the economic growth, employment generation and poverty alleviation in Pakistan. Modern economy requires the presence of SMEs for a balanced functioning, as they are adapting more quickly to changes in economic and social conditions, activating almost in all sectors of the economy (Ciubotariu, 2013).

Fida (2008) remarked that SMEs contribute to economic development in various ways: by creating employment for rural and urban growing labor force, providing desirable sustainability and innovation in the economy as a whole. The SME sector contributes a formidable portion to the nation's GDP, export and industrial production and started to achieve benefits of economies of scale, specialization and innovation (Naser, 2013). Das (2014) revealed that there is a continuous growth of the number of MSME units whereby it enhances production, employment and exports.

Uma (2013) studied the role of SMEs in economic development of India and highlighted that SMEs are very important and represented a model of economic development which emphasized high contribution of domestic production, high export earnings, low investment requirements, employment generation and effective contribution to foreign exchange earnings with low import-intensive operations.

Storey and Johnson (1990) in their paper designed to provide an overview of some of the key trends in small business development in the U.K., by surveying analyses of small business data sets. It focussed on data sets which are concerned with the birth and death of primarily small enterprises, with particular emphasis upon the impact of smaller firms on employment creation. There is no single official data set which comprehensively covers all sizes of firms or enterprises. Nevertheless, after an exhaustive review of several sources, the review supports the view that small firms have increased in number in the U.K. in recent years, with growth occurring particularly in the numbers of very small firms.

Hailey (1991) has mentioned that the contribution of the small business sector to national development can be assessed in terms of inter-related economic, social and political issues:

1. The economic contributions like the creation of employment, wealth creation, increased output, resource mobilization and adaptation of technologies.

2. The social benefits like poverty reduction, balanced development, provision of goods and services appropriate to local needs, a seedbed for new initiatives, redistribution of both income and opportunity in the community in general, and a greater degree of personal involvement and commitment.

3. The political benefits result from the redistribution of wealth, opportunity, and therefore power within the community.

He also highlighted the role of small-scale enterprises in the development process and concluded that a viable small business sector is an effective tool in creating employment, reducing poverty, generating economic growth, introducing innovation, and by redistributing wealth and opportunity a degree of personal independence.

Vepa (1997) stated that the importance of the small and medium enterprise is recognized not merely in the developing countries but in the developed countries as well where production and management techniques are finding small profit centres more effectively than operating as large conglomerates. Garg (1999) reviewed the growth of SSI in India and found out that the smaller small scale industries are growing not only numerically but also in terms of employment, investment and output. There is a positive effect of an increase in the economy-wide share of small firms on growth in the gross domestic product (Carree and Thurik, 1998).

Dutta and Singh (2003) argued that the small-scale industry is a key to India's growth and alleviation of poverty and unemployment in the country. Therefore, they suggested that promotion of such enterprises in developing economies like India is of paramount importance since it brings about a great distribution of income and wealth, economic self-dependence, entrepreneurial development, employment and a host of other positive, economic uplifting factors.

Ogechukwu (2006) summarised that SMEs have contributed greatly to Nigerians development by the provision of employment, marketing of goods and services and the growth and development of rural areas and also it has brought about the growth of indigenous entrepreneurship in Nigeria.

Kongolo (2010) revealed that in South Africa, SMEs account for about 91 percent of the formal business entities, contributing to about 51 percent and 57 percent of GDP, providing almost 60 percent of employment. Qamruzzaman (2015) assessed the performance and contribution of SMEs and reveals that SMEs have noteworthy contribution to GDP, employment, poverty alleviation and women empowerment which has strengthened the economic efforts to achieve high and sustainable growth. The study suggested that introducing appropriate policies, government's intervention and initiatives and infrastructural enhancement are some factors to tackle the problems and expedite the development of SMEs.

UNIDO (1969) also asserted that the promotion of small and medium industries was justified because they served two major development objectives:

a. The social objectives, which includes: (i) Stimulation of indigenous entrepreneurship. (ii) Transformation of traditional industry and (iii) Creation of employment.

b. The Economic objectives, which includes: (i) Dispersal of industry (ii) Diversification of industrial structure, and (iii) Increased utilization of resources. The above mentioned objectives are clearly what the role of small-scale industries are expected to achieve in the country and the state.

Dey (2014) highlighted that MSME sector assumes greater importance now as the country moves towards a faster and inclusive growth. He concluded that small and medium enterprises contribute to economic development like creating employment opportunities and maintain sustainable development to the economy as a whole. Eyo (1989) in his study examined the impact of public policies on the development and performance of small-scale industries programs in Nigeria. Latif and Abdullah (2014) in their study remarked that small industrial units have become the seedbed on industrial development in the underdeveloped economy due to less capital involvement and more employment generation capability.

However, various studies uphold that those new firms that survive and achieve a fast growing stage have significant effects in the economy (e.g. Birch, 1979; Storey, 1994; Delmar, 1997) and that fast growth is an indicator of the firm's overall success (Ficsher and Reuber, 2003).

IV.2 MSME and Employment

Labour employment is an important component of industries and intensity of labour input is not only the function of production maximization of the firm but it is also influenced by availability of labour force. Thus, the importance of labour employment, its volume and quality, for the industrial development has been felt since long time back and it drew the attention of scholars to study the labour employment and labour

characteristics. Lewis had a conviction that labour-reallocation from agricultural sector to industrial sector which results in the migration of labour from primary sector to the secondary sector. Lewis advocated that this process of labour migration ultimately shifts the centre of gravity of the economy towards the industrial sector whose ultimate result being the heart of development problem in an agriculture predominant labour surplus economy like India (Lewis, 1954).

High and rising unemployment rates in the early 1990s have moved the employment question centre-stage in the policy debate (Schreyer, 1996). Issues paper of OCED working paper on SMEs and Entrepreneurship (2010) reviewed that new firms and innovative SMEs are playing an increasing role as drivers of growth and job creation in the economy. Entrepreneurship is the only way to create jobs (Kumar, 2012).

Nath (1998) asserted that persistent effort is needed to promote small-scale industries in India as a source of large-scale employment generation and equitable distribution of income. Smaller firms generate proportionally more jobs, suggesting support given to stimulate employment should be directed at newly established micro firms (Heshmati, 2001). There is evidence that small and medium enterprises sector creates the majority of the country's net new employment (Kongolo, 2010); creates employment opportunities even for semi-skill and unskilled rural people (Naser, 2013); and SMEs is a remarkable place in the removal of poverty and unemployment (Awan, et. al., 2015).

While emphasizing on the role of SMEs in Botswana, Nkwe (2012) pointed out that SMEs have a higher rate of employment than the larger firms and also SMEs contribute not only to income generation but also income distribution which has helped reduced poverty problems to a great extent. Cook and Nixon (2000) also remarked that in

order to achieve reduction of poverty, SMEs in developing economies can opt for broader economic and socio-economic objectives. Ferdman (2007) in her paper presented to the United Nations stated that all authorities recognize the importance of raising the standard of living by job creation and yet increased employment is not enough. Therefore stresses that the objective should be creating decent and productive employment.

Abor and Quartey (2010) in their study showed that SMEs in Ghana have been noted to provide about 85 percent of manufacturing employment of Ghana. They are also believed to contribute about 70 percent to Ghana's GDP and account for about 92 percent of businesses in Ghana. In the Republic of South Africa, it is estimated that 91 percent of the formal business entities are SMEs. They also contribute between 52-57 percent to GDP and provide about 61 percent to employment. Satake (1998) also found that in Phillippines manufacturing sector employ more 40 percent of the labour force. Since they can be started with a small amount of capital, they are characterised by the easy entry in the business and provide employment opportunities for the populace at low cost. Birajdar (2011) found that SSI accounts for 55 percent of manufacturing and employment in Kolhapur district of Maharashtra.

Mancuso (1984) in his book gave an account of the importance of small business in the United States of America. In fact, America's small businesses constitute 97 percent of the business community; they provide 52 percent of all private employment, 43 percent of U.S business output and one-third of the Gross National Product. Garg (2014) reviewed that due to low capital cost of MSMEs, it plays an important role in the growth of GDP and employment opportunities. Mishra (2012) found that MSMEs including Khadi and Village/rural enterprises play a vital role in employment growth and the development of economy due to their flexible and innovative character. Sharma and

Afroz (2014) also highlighted that MSME occupies a very important position in Indian Economy System due to its remarkable contribution to output, exports and employment. Geete and Thakur (2012) were of the view that small-scale industries can solve the problem of unemployment easily and strengthen the economy.

Krongkaew (1988) in his article 'The Current Development of Small and Medium Scale Industries in Thailand' highlighted the importance of small-scale industries as an institution that could solve unemployment problem, especially in Labour abundant countries. Arocena et al. (2007) found that the higher the business uncertainty and lay-off risk, the higher the productivity gains due to the increase of employability because of labour productivity in the context of job insecurity.

Baral (2013) recapitulated that MSMEs lead to the entrepreneurial development and the diversification of the industrial sector. They provide depth to the industrial source. Employment opportunities are generated and the capital cost per employee is low. There is also a favourable environment now with the government committed to give impetus to this sector through infrastructure development, skill set development, entrepreneurship development, technology upgradation, etc. Main fruits of SMEs development are in the shape of employment generation and transformation from low-income economies to high-income economies (Subhan et al., 2013). Katua (2014) concluded that most employment opportunities are provided by SMEs.

Lone and Mehraj, (2015) also pointed out that these industries stimulate innovative ideas, business methods, and entrepreneurial skills; they are effective and flexible to adjust more quickly to market demand and supply conditions and helps in diversifying economic activity. In India MSME are vital from the point of view their

overall contribution in terms of the number of units, production, exports, employment and their spread in rural areas.

Jaswal (2014) summarised that MSMEs plays a key role in providing employment which also helps in the industrialisation of rural and backward areas, reducing regional disparities and thereby, guarantee a more equitable distribution of income and wealth. Srinivas (2014) concluded that the major advantage of the MSME sector is its employment prospective at a reasonably cheaper rate of investment.

Goswami and Thakur (2015) while analysing the growth of entrepreneurship in MSME in Madhya Pradesh postulated that MSME creates the required manpower and skills necessary for accelerated growth, reduce unemployment and poverty. They also opined that the government needs to create an investor-friendly environment and design stable government policies. Bekele and Worku (2008) also remarked that there is an increasing recognition of the potential importance of micro, small and medium enterprises (MSMEs) for employment, income and poverty reduction in Ethiopia.

Wiboonchutikula (2002) found that the contribution of SMEs to employment growth seems to exhibit some relationship with industrial growth. During the high growth period, large and medium firms seem to contribute more in terms of employment growth because many small firms grow to become larger firms. During the period of slowest growth or stagnation, employment growth declines and in this situation, it is possible that we observed the growth of many small firms, and in particular, firms of micro industries whose owners are former employees of a medium or large firm. Many of these new business creators were formerly unemployed and possessed entrepreneurial ability or spirit to set up their own production for survival in their home towns during difficult time. Despite the fact that as more new small firms started up and they became sources of

employment during the stagnation period, the capacity of SMEs to generate employment during normal times needs further investigation. However, although SMEs generate less employment per firm by definition, they may be considered to created greater employment if it can be shown that they are more labour-intensive and thus employ a greater number of workers per unit of capital input or investment.

IV.3 MSME and Finance

Chakrabarty (2012) in his study finds that MSMEs primarily rely on bank finance for their operations and as such ensuring a timely and adequate flow of credit to the sector has been an overriding public policy objective. SMEs face a number of problems, such as, absence of adequate and timely banking finance, limited capital and knowledge, non-availability of suitable technology, low production capacity, ineffective marketing strategy, identification of new markets, constraints on modernisation & expansion, non availability of highly skilled labour at affordable cost, follow up with various government agencies to resolve problems, etc

Kadam (2011) summarized that by contributing its increasing share to the national production, employment & exports, small-scale industries also contribute to the economic development of the country. However, these industries are also plagued by the problems of raw material, finance, marketing, underutilization of capacity, etc. cash has become a big problem for small & even big businesses today. Lack of finance has driven many small business units into bankruptcy. Unfortunately, many small businesses will become bankrupt because their owners have neglected the principle of cash management which normally determines their successes or failure.

The analysis of specific element of strategic financial management practices of the model, namely strategic financial planning, strategic working capital management, strategic fixed-asset management and strategic financial reporting and control practices, and to what extent the execution of an "emergent" or "deliberate" strategic management approach in the conduct of these financial management practices would lead to better performance results, can provide significant contributions to SME financial management (Karadag, 2015). Pandey (2013) pointed out that the small and cottage industries in the state of Uttar Pradesh are suffering from adequate and timely finances. He stated that the problem of finance is widespread and is a major constraint to industrial growth. Thus, he suggested that this problem needs immediate remedy.

Kasekende and Opondo, (2003), rightly pointed out that finance plays a central role in enterprise development and is possible only when they are accessible and reasonably priced. Financial management is concerned with all areas of management which involve finance – not only the sources and uses of finance in the enterprise, but also the financial implications of investment, production, marketing or personnel decisions and the total performance of the enterprise (Meredith, 1986). Carpenter and Petersen (2006) highlighted that finance play a key role in the growth of small firms which is often constrained by the quantity of internal finance.

Okowe et al. (2016) in their study on 'Economic openness and industrial development in Nigeria' showed that rate of change in exchange, trade and openness and lending rate exert a significant negative impact on industrial output. There is also evidence of a significant positive impact of financial deepening on industrial output. Bernard et al. (2014) concluded that majority of MSME businesses have resorted to the use of equity financing for their operations mainly because of high interest rate.

Since the closure rate of SMEs is higher than larger enterprises, the financial service providers tend to consider SME financing risky (Caves, 1998). However, the implementing agencies need to be vigil in providing assistance to priority enterprises so as to encourage serious entrepreneurs. Kawai and Urata (2002) also suggested that to reduce technical barriers, the government can provide technical education and training to prospective SME entrants and provide financial assistance to reduce financial or capital requirement barrier. He further suggested recognising of financial assistance to incumbents could protect them from entry, it is important that financial assistance is given to potential entrants and incumbents with high potentiality.

The White Paper on Growth, Competitiveness and Employment by Liargovas (1998) made an assessment of the homogeneous approach and policy measures adopted towards SMEs in Greece. It is found that micro enterprise constituted 96 percent of the total enterprises which is playing a significant role in Greek economic and social life. Micro enterprise shows that there is a large number of non-primary employments and the largest share of self-employment in the total labour force. The study suggested two basic policy measures - financial assistance (seed capital funds, global and subsidised loans, guarantee schemes and SME initiative) and micro policies (SME co-operation and SME information) to weave the economic and social framework. Since financial assistance are ineffective, the author suggested that assistance should be focussed on incentives and services, which support co-operative action in local and foreign markets, rather than on direct SME financing.

IV.4 MSMEs determinants

Jasra et al. (2011) studied the determinants of business success of small and medium enterprises like financial resources, technological resources, government support, marketing strategies and entrepreneurial skills. The study found that financial resources are the most important factor that affects the SMEs success and due to less government financial support to entrepreneurs, they are facing a lot of problems and are also not contend with the marketing activities of their products. They also found that business success is directly dependent upon technological factors and the production efficiency can be increased by using new technology. The study also concluded that leadership skills, decision-making skills, management skills and professional affiliation with the business are also very important in achieving business success.

Wu (2009) finds that SME's performance depends on whether the company can formulate appropriate strategies and process, to align its resources with its environment in order to achieve desirable results and objectives. The study also found that there are eight determinants that have impact on SME performance like competitive team, right strategies, core competency, competitive advantages, customers focusing, internal process management, resource utilisation and organisational ability. Khalique (2011) argued that SMEs need to upgrade their intellectual capital including knowledge, data-base, technological advancement and innovation in order to stay in a competitive environment.

There exist wide variations in the size structure and size-composition of enterprises between countries, even among the countries of more or less the same level of economic development. Nanjundan (1994) pointed out that the size of enterprises or

establishment does not crucially determine business performance measured either in economic or social terms. Instead, business performance depends decisively on organisational structure and on public and private policies which influence their development. He also considers that adapting to economic reforms in a globalising economy demands a drastic change in the mind-set, in work culture and attitude towards business ethics, zero defects culture, striving for continuous skill upgradation and for excellence.

Ravi (2009) in his study found that improving access to finance in the form of availability of bank branches and providing improved infrastructure facilities can be a good determinant of MSMEs growth. He opined that not all specific policies which have been implemented specifically for the development and growth of MSME sector have had a great impact and as such pumping more financial subsidy into a sector is not necessarily the best way to encourage the growth of a sector. This is so because both banks and the government financial subsidies are ultimately aimed at providing improved access to credit but the subsequent impact is opposite to one another. While banks seem to improve growth may be due to banks financing viable businesses, the government subsidies are negatively related to all performance measure of MSMEs might be due to subsidies are channelled into unproductive and non-feasible ventures.

Soini and Veseli (2011) analysed the factors influencing SMEs growth in Kosovo and found that there are a number of significant factors affecting Kosovar SMEs growth and major factors among them are lack of access to finance, competition, corruption, globalisation, laws and regulations, management competence, lack of skilled labour, and low investment in innovation, technology and marketing.

Oketch (2006) suggested that human capital formation determines economic growth and development. Bowen, Morara and Mureithi (2009) also pointed out that relevant training or education is having a positive impact on business success. They also find that business networking, competitive pricing or low cost, selling variety of products and services and availability of capital and credit from banks are some of the key factors contributing to the good performance of businesses. Voulgaris et al. (2003) found that some of the positive determinants of small firm growth are profitability of total assets, long-term debt reliance and employee productivity.

Sarwoko and Frisdiantara (2016) analysed the growth determinants of SMEs and found that environmental factors are the having the greatest impact in the growth of SMEs which means the ability of owner/managers to produce competitive products, leverage technology, and diversity of products will determine the growth of SMEs.

IV.5 MSMEs and innovation

Innovation may be linked to positive changes in efficiency, productivity, quality, competitiveness and market share. Grossman and Helpman (1991) did not agree with the traditional growth theory which emphasizes the incentives for capital accumulation rather than technological progress where innovations are treated as an exogenous process or a by-product of investment in machinery and equipment, and therefore they said that innovation is a deliberate outgrowth of investments by forward-looking and profit-seeking agents.

Small enterprises are considered as the main driver for innovation, poverty reduction, employment generation and social integration, and due to innovation capacity of SMEs, production capacity can be amplified and brings about economic development

and social development (Subhan et al. 2013). Roper (1997) argued that innovations in small firms are important because it is a direct contribution to the competitiveness of the company, but also because of the potential of the small business sector acting as an indicator for broader technical change.

Zimmermann (2009) found that positive employment effects of innovations are not restricted to narrow segments of the economy. Thus, an economic policy aimed at bolstering the innovative strength of firms is a strong encouragement to employment on a broad basis. SMEs are capable of pushing economic reforms and modernisation of local economies.

Mbizi et al. (2011) in their study entitled 'Innovation in SMEs: A review of its role to organisational performance and SMEs operations sustainability' argued that SME competitiveness advantage is based on the knowledge where innovation and creativity become decisive factor in the economic activity. The study finds that innovation is one of the major attributes which aid SMEs to remain competitive and there is a strong link between innovation and SMEs operations sustainability.

Valdez-Juarez et al. (2016) studies on 'Management of knowledge' has analysed the influence of knowledge management on SMEs' innovation and performance in a period of global recession and their findings indicate that the level of influence of innovation on performance of SMEs is relatively low and therefore suggested that it SMEs should continue with the establishment of policies and strategies to strengthen innovative activities. Suman et al. (2014) suggested that two-pronged strategies is needed to make Indian MSMEs more innovative, the first strategy consist of initiatives which are within the control of individual firms and secondly the initiatives to be taken up by the government to promote innovation.

OCED (2000) observed that because of the heterogeneity of the SME population, any policy to increase their innovative capacities must be targeted to meet the needs of a variety of user groups, have different objectives, and use multiple approaches and tools. SMEs contribute greatly and increasingly to the innovation system by introducing new products and adapting existing products to the needs of customers.

IV.6 MSME and Production

Production is the act or process of producing which results in the creation of utility. It is considered as the making of goods for use and subsequently as the total output of an industry.

Bhatt (2016) summarised that Indian MSMEs constitute ninety percent of the total number of industrial enterprises and the major advantage of this sector is its contribution to industrial production. Economic activities, such as export market, growing domestic consumption, favourable policy measures, improving production methods, etc, fuelled production capacities (Uma, 2013). Mawardi (2014) found that there are static industrial clusters that grow from traditional production systems. Rasool et al. (2013) concluded that commercial banks are core source for SME borrowing and hence rationally affect the production of SMEs in terms of working capital requirement. Unam and Unam (2013) also found that micro-finance banking has a significant effect on the productivity of small-scale business.

A production function is a physical relationship between input and output and it describes a frontier representing the limit of output obtainable from a feasible combination of input.

With the work of Charles W. Cobb and Paul H. Douglas in 1928, the history of production function take a new turn whereby Cobb-Douglas type of production function has been estimated by agricultural economists for virtually any production process involving the transformation of inputs into outputs in an agricultural setting and economists have used Cobb-Douglas type of specification for virtually every conceivable type of production process.

Humphrey (1997) remarked that fundamental to economic analysis is the idea of a production function. A production function is simply a set of recipes or techniques for combining inputs to produce output. Production functions apply at the level of the individual firm and at the macro economy at large. At the micro level, economists use production functions to generate cost functions and input demand schedules for the firm. The famous profit-maximising conditions of optimal factor hire derive from such micro-economic functions. At the level of macro economy, analysts use aggregate production functions to explain the determination of factor income shares and to specify the relative contributions of technological progress and expansion of factor supplies to economic growth.

Hossain and Islam (2013) analysed the manufacturing sector of the south-west region and use Cobb-Douglas Production function to estimate the productivity, allocative efficiency and measuring returns to scale. The study showed that cement, jute and textile manufacturing firms have decreasing return to scale whereas fertilizers and seafood processing firms have increasing return to scale. The Study further showed that in the estimated value of marginal productivity and allocative efficiency, labour productivity of all sorts of manufacturing firms is greater than the capital productivity.

Prajneshu (2008) made a fitting of Cobb-Douglas Production Function by first linearizing the models through logarithmic transformation and then applying the method of least squares. Naqvi and Ashfaq (2013) and Memon et al. (2016) had use Cobb-Douglas production involving various production associated factors while analysing the total production of maize on farms.

Miller (2008) pointed out that there does not appear to be overwhelming evidence that would lead one to choose the CES over the Cobb-Douglas for forecasting GDP and income shares. When empirical estimates are restricted to the Cobb-Douglas form, the fit tends to be quite good.

Josheski et al. (2011) argued that one of the most commonly used production function by economists is Cobb-Douglas production function which represents a simple production function that gives a responsible description of actual economies. Cobb-Douglas production function provides an opportunity to establish the participation of certain factors of production in creating the total output in the economy.

IV.7 Challenges and Problems of MSMEs

Though MSMEs are considered to be vital for the development and growth of the economy, there are many challenges, constraints and problems. Aidis (2005) remarked that perceived formal barriers are associated with perceived informal barriers such as corruption and perceived environmental barriers are associated with perceived skill barriers such as management problems.

Saluja (2012) opined that despite the MSMEs strategic importance in overall industrialization strategy and employment generation, Indian landscape presents the small sector due to its large dependency on credit. Garg (2014) while analyzing the role of

MSMEs in economic development highlighted that MSMEs are contributing a lot to the Nation's economy but there are certain challenges which affect growth of the sector such as access to finance, access to markets, lack of technological knowledge, lack of proper infrastructure, lack of managerial personnel and inadequate market information. Nkwe (2012) also found that challenges faced by SMEs in Botswana are marketing skills, financial, competition and lack of training and management skills.

Desai (2000) found out that financial inadequacy is one of the most important causes leading to the sickness of small-scale units. He suggested that bank should guide small entrepreneurs in their financial management problems and offer preventive assistance to them in cases where sickness is anticipated. Mutoko (2014) also pointed that MSMEs challenges include lack of or limited access to markets, financial inadequacies, limited management skills, poor work ethics and lack of competitiveness. Olawale and Garwe (2010) in their study also found that the most important obstacle is finance. There are also other obstacles like economic, markets, management and infrastructure which enterprises faces. Kadiri (2012) observed that small and medium sector is unable to achieve the desired goal due to its inability to obtain adequate business finance.

Narayana (2004) viewed that there is considerable delay in getting credit, registration, clearances and permissions etc., which reduces small-scale industries competitiveness. SSI in Kolhapur district of Maharashtra face problems like lack of credit facilities, problem of raw materials, power shortage, marketing problem, poor technology and under-utilisation of capacity. Verma and Kuldeep (2014) also pointed out that high cost of credit, lack of access to international markets, lack of skilled man-power, inadequate infrastructure facility, etc are some of the key challenges and problems faced by MSME sector.

Thevaruban (2009) while examining small-scale industries and its financial problems in Sri Lanka found that MSMEs of small-scale industries in Sri Lanka found it extremely difficult to get outside credit because the cash inflow and savings of the MSMEs in the small-scale sector are significantly low. Pettit and Singer (1985) study underscored that financing is the most difficult problems of the MSMEs in the USA. Naidu and Chand (2013) in their study demonstrated that financial obstacles like inability to obtain external and internal financing, insufficient working capital, heavy start up costs, expensive raw materials, high wholesale price, large losses due to scrap rate, sabotage, breakage and crime, decline in sales volume, high bad debts and write offs, high government tax, VAT and customs duty, heavy equipment maintenance costs, high payroll, rent and utilities, high transportation and petrol costs, high rates of interest on loans, inability to meet financial obligation, and delays in account receivables payment are the most severe problems for the MSMEs in Fiji.

Inadequate financial sector development limits successful achievement of economic and social goals (Kyaw, 2008). Financial constraints and Lack of management skill hamper the efficient performance of micro and small-scale enterprises in Nigeria and as such government and other non-governmental organization should regularly organize seminars for potential and actual small and medium enterprise operators on how to plan, organize, direct and control their businesses, and that micro, small and medium enterprises operators' should device effective marketing strategies and good management customers relations at all times (Osotimehin et al., 2012).

Lack of proper financing, improper planning and lacking management ability are some causes for the failure of small enterprises (Longenecker, et al., 2006). Junejo et al., (2007) in their studies found that the major causes of small-scale industries sickness are

Lack of good management, Inadequate Feasibility, Marketing Problems, Poor Credit Facilities, Shortfall of working capital, Load shedding problem, Tax problem and Law & Order problem. Hall (1995) also stated that lack of knowledge of the market is an important factor that contributes to failure. SMEs have lower survival rates than large firms because of resource constraints (Beck et al. 2005).

Studies conducted by Wiboonchutikula (2002) found that SMEs faces problems of insufficient capital attached with high rates of interest and labour shortage due to increased real wage rate, followed by marketing problems, uncertain government policies, and raw material shortages. Kaliyamoorthy and Parithi (2012) also found that there is a remarkable scope for increasing the potentials of MSME in India, but there are many problems like production, marketing, human resource and finance which hampers its growth. Rankhumise and Rugimbana (2010) findings showed that entrepreneurs are facing problems like access to government funding, crimes, lack of appropriate education and training and stifling of government regulations which hamper the growth of the business.

Bowen, Morara and Mureithi (2009) in their study on the management of business challenges among small and micro enterprises in Nairobi-Kenya concluded that competition, insecurity, debt collection, lack of working capital and power interruptions were the top five challenges facing business in Nairobi. They also find that government laws and regulations is a major obstacle to SMEs operations.

Smit and Watkins (2012) in their study found that the impediments to SME success include inherent organisational obstacles like poor management skills and education and training, industry related problems like entrepreneur's inability to

understand market expectations and poor market access, and economy-based problems such as interest rate fluctuations.

V: Objectives of the Study

The objectives of the study are:

1.   To examine MSMEs in terms of nature of business, ownership pattern and organisational set-up.

2.   To analyse the determinants of output.

3.   To study the contribution of MSMEs in terms of employment and income.

4.   To examine the various constraints in the growth of the MSMEs.

VI: Hypotheses of the Study

1   MSMEs have a positive impact on employment and income.

2   MSMEs operate under decreasing returns to scale.

3.   Manufacturing sector is capital intensive while services sector is labour intensive.

VII: Research Methodology

VII.1   Data sources

The study is based on both secondary and primary data. For the secondary data, Reports from the All India Census of SSIs, Basic Statistics of North Eastern Council, books, journals, departmental annual publications, statistical handbooks of Nagaland and various state government publications were referred.

VII.2 Sample design and study area

The study covers three towns of Nagaland viz. Dimapur, Kohima and Phek, using primary data collected from 318 respondents. Random sampling method was used to collect data from the respondents. Data were collected using a set of questionnaire. In manufacturing and allied sector data of 39 units were collected from Dimapur, 33 units from Kohima and 13 units from Phek. In services and allied sector data of 101 units were collected from Dimapur, 88 units from Kohima and 44 units from Phek. Category-wise, in the manufacturing and allied sector, 85 units were collected comprising of 66 micro units, 18 small units and 1 medium unit; and in the services and allied sector, 233 units were collected comprising 159 micro units, 64 small units and 10 medium units.

Dimapur: Dimapur was established in the year 1997 as the eighth district of Nagaland from the then Kohima district. It is located at an altitude of 260 meters above sea level and is bounded by the states of Assam and Meghalaya, and districts of Peren and Kohima. Dimapur has four blocks and 219 revenue villages. Dimapur, the major commercial hub in Nagaland, has a heterogeneous mix of people from all over India, and for which it is also known as "mini India." Besides the dominant Naga tribes who comprise about 50 percent of the city's population, other prominent groups include Bengalis, Assamese, Nepalese, Biharis, Marwaris, Punjabis and also Tamilians and Keralites and Tibetan traders.

Out of the total MSMEs that are permanently registered during 2013-14, 46.83 percent are set up in Dimapur Among the activities, manufacturing of furniture had the largest number with 13 units accounting 22.03 percent in the district and accounted 65.00 percent of the state, followed by other business activities accounting for 13.56 percent of

the total enterprises in the district and 50.00 percent of the total enterprises in the state. During 2014-15, enterprises in Dimapur accounted 62.82 percent of the total enterprises in the state while in 2015-16, with 500 enterprises, Dimapur constitutes 34.94 percent. And among the activities, other business activities have the largest enterprises with 300 units and are followed by maintenance & repair of motor vehicle & motorcycles and manufacturing of furniture.

Table I.13: No. of trade-wise EM Part-II Registered (MSME)

Particulars	2013-14	2014-15	2015-16
Mfg. of Food Products & Beverages	7 (58.33)	3 (27.27)	3 (27.27)
Mfg. of Weaving Apparel	2 (25.00)	2 (33.33)	3 (43.86)
Training & Dressing of Leather	-	-	-
Mfg. of Wood & Wood Products except Furniture	1 (33.33)	1 (100.00)	1 (100.00)
Publishing, Printing & Reproduction of Recorded Media	4 (100.00)	2 (100.00)	2 (100.00)
Mfg. of Chemical & Chemical Products	1 (50.00)	-	-
Mfg. of Rubber & Plastic Products	-	-	1 (100.00)
Mfg. of Other Non-metallic	5 (33.33)	2 (100.00)	2 (100.00)
Mfg. of Fabricated Metal Products	6 (27.27)	13 (72.22)	30 (30.00)
Mfg. of Furniture	13 (65.00)	8 (57.14)	40 (22.86)
Maintenance & repair of Motor Vehicle & Motor Cycles	-	1 (33.33)	55 (26.19)
Maintenance & Repair of Personal & Household Goods	3 (30.00)	-	20 (27.40)
Computers & related Activities	2 (33.33)	-	30 (38.96)
Other Business Activities	8 (50.00)	5 (83.33)	300 (40.00)
Health & Social Work	1 (100.00)	-	-
Other Services Activities	6 (85.71)	12 (80.00)	13 (65.00)
Total	59 (46.83)	49 (62.82)	500 (34.94)

Source: Statistical Handbook of Nagaland- 2015 & 2016
* Figure in parenthesis indicates percentage

Kohima: Kohima is the capital of Nagaland located at an altitude of 1,444 meters above sea level and is bounded by Dimapur, Peren, Phek, Wokha, Zunheboto and Manipur. Kohima has five blocks and 97 revenue villages. The main indigenous inhabitants of Kohima District are the Angami Nagas and the Rengma Nagas. Kohima being the capital city, it is a cosmopolitan city with all the tribes of Nagaland as well as mainland Indians residing here. Kohima, as per 2011 census, covers a total geographical area of 1595 sq.km, which is 9.62 percent of State's total geographical area. Kohima is inhabitant to 2,67,988 persons comprising of 1,38,966 males and 1,29,022 females making the sex ratio of 928 females per thousand males.

Table I.14: No. of trade-wise EM Part-II Registered (MSME)

Particulars	2013-14	2014-15	2015-16
Mfg. of Food Products & Beverages	4 (33.33)	4 (36.36)	4 (36.36)
Mfg. of Weaving Apparel	3 (37.50)	4 (66.67)	4 (57.14)
Mfg. of Wood & Wood Products except Furniture	1 (33.33)	-	-
Mfg. of Chemical & Chemical Product s	1 (50.00)	-	-
Mfg. of Rubber & Plastic Products	-	-	-
Mfg. of Other Non-metallic	4 (26.67)	-	-
Mfg. of Fabricated Metal Products	7 (31.82)	4 (22.22)	15 (15.00)
Mfg. of Furniture	2 (10.00)	4 (28.57)	30 (17.14)
Maintenance & Repair of Motor Vehicle & Motorcycles	-	2 (66.67)	60 (28.57)
Maintenance & Repair of Personal & Household Goods	2 (20.00)	-	15 (20.55)
Computers & Related Activities	3 (50.00)	-	20 (25.97)
Other Business Activities	5 (31.25)	-	250 (33.33)
Health & Social Work		-	-
Other Services Activities	-	1 (6.67)	3 (15)
Total	**33 (26.19)**	**19 (24.36)**	**401 (28.02)**

Source: Statistical Handbook of Nagaland- 2015 & 2016
* Figure in parenthesis indicates percentage

Table I.14 shows that during 2013-14, 26.19 percent of the total MSMEs were permanently registered and 2014-15, it was 24.36 percent respectively which in 2015-16 had increased to 28.02 percent.

In 2013-14, manufacturing of fabricated metal products had the largest number with 7 units accounting for 21.21 percent in the district and accounted 31.82 percent of the total fabricated metal products in the state followed by other business activities with 15.15 percent in the district and accounted for 31.25 percent of the total manufacturing of furniture. In 2015-61, among the activities, other business activities are largest with 250 units followed by maintenance and repair of motor vehicles and motorcycles with 60 units.

Phek: The district of Phek lies in the south-eastern part of Nagaland which was established on 21st December 1973. Phek is located at an altitude of 1,444 meters above sea level and has a total area of 2026 sq.km bounded by Kohima, Zunheboto, Manipur and Myanmar. It has five Sub-divisions with 104 revenue villages. The main indigenous inhabitants of Phek District are the Chakhesangs and the Pochurys. As per 2011 census, Phek is inhabitant to 1,63,418 persons comprising 83,743 males which constitute 51.2 percent of the district total population and 79,675 females which constitute 48.8 percent of the total district population giving the sex ratio for the district as 951 females per thousand males Phek covers a total geographical area of 2026 sq.km, which is 12.22 percent of State's total geographical area.

In Phek, 2.28 percent of the total MSME enterprises are permanently registered during 2015-16. Among the activities, other business activities have the largest number with 20 units which accounts 42.55 percent and is followed by manufacturing of furniture

10 units accounting for 21.28 percent and maintenance of motor vehicle and motorcycles with 9 units accounting for 19.15 percent in the district.

Table I.15: No. of trade-wise EM Part-II Registered (MSME)

	2015-16	
Particulars	Phek	Nagaland
Mfg. of Fabricated Metal Products	3 (6.38)	100
Mfg. of Furniture	10 (21.28)	175
Maintenance & Repair of Motor Vehicle & Motor Cycles	9 (19.15)	210
Maintenance & Repair of Personal & Household Goods	3 (6.38)	73
Computer & Related Activities	2 (4.26)	77
Other Services Activities	20 (42.55)	750
Total	**47**	**1431**

Source: Statistical Handbook of Nagaland- 2016
* Figure in parenthesis indicates percentage

VII.3 Data analysis

Data collected were analysed using various statistical methods as given below:

Standard Deviation: The Standard Deviation is also known as root mean square deviation for the reason that it is the square root of the mean of the squared deviation from arithmetic mean. A smaller standard deviation means greater degree of uniformity of the observation. The standard deviation is denoted by the small Greek letter σ (read as *sigma*). It is represented mathematically by:

$$\sigma = \sqrt{\Sigma fd^2/N - (\Sigma fd/N)^2} \times i,$$

Where, *i* is the class interval.

Coefficient of Variation: Coefficient of Variation (CV) is a relative measure of dispersion. It is the percentage variation in the mean. The greater the value of CV, the larger is the variation between the numbers of observation. It is expressed by the formula:

$$CV = \sigma \,/\, mean \; X \; 100$$

Correlation: Correlation is an analysis of the co-variation between two or more variables. It is the technique used in measuring the closeness of the relationship between the two variables. Thus, it is useful in determining the dependency of one variable with the other. It is given as:

$$r = \{N\Sigma dxdy - (\Sigma dx)(\Sigma dy)\} \div \{\sqrt{N\Sigma dx^2 - (\Sigma dx)^2} \; \sqrt{N\Sigma dy^2 - (\Sigma dy)^2}\}$$

Regression: Regression analysis is a mathematical measure of the average relationship between two or more variables in terms of the original units of the data. The variable whose value is influenced or predicted is called dependent variable and the variable which influences the values is termed as independent variable or predictor. The regression equation of y and x is expressed as:

$$Y = a + bx$$

Where, Y is the dependent variable and x is the independent variable, while 'a' (γ intercept) is constant and 'b' (slope) is the regression coefficient.

$$byx = \{N\Sigma YX - (\Sigma Y)(\Sigma Y)\} \div \{N\Sigma X^2 - (\Sigma X)^2\}$$

Regression analysis for production function

The variables affecting total output is expressed in the form of equation as

$$Y = f(X_1, X_{2,}\ldots, Xn)$$

Where, Y = Gross monthly income, X_1 = Wages, X_2 = Rent, X_3 = electricity,

X_4 = raw materials, X_5 = transport and X_6 = miscellaneous (For manufacturing sector).

And, Y = Gross monthly income, X_1 = Wages, X_2 = Rent, X_3 = electricity and

X_4 = miscellaneous (For services sector).

In analysing the factors determining Y_t, a multiple linear regression model has been applied, as such

$$Y_t = b_0 + b1X_{1t} + b2X_{2t} + e^t$$

Where, Y = Gross monthly income

b_0 = Constant

b^s = Regression coefficient of independent variables

X^s = Independent variables

t = (1,2,3,…,85) for manufacturing sector and t = (1,2,3,…,233) for services sector

e^t = Error term (representing the remaining variation in Y that cannot be explained by a linear relationship with X)

Cobb-Douglas Production function

For this analysis, the Cobb-Production function is given as

$$Q(L,K) = AL^{\beta 1} K^{\beta 2}$$

Where ,   Q= Total output or Gross monthly income

A= Total factor productivity which is constant and independent of labour

and capital

L= Labour input

K= Capital input

β_1 = Output elasticity of labour

β_2= Output elasticity of capital

Here   A, β_1 and β_2 are the unknown parameters.

We know that, when $\beta_1 + \beta_2 = 1$, it is a case of a constant return to scale,

when $\beta_1 + \beta_2 < 1$, it is a case of a decreasing return to scale and

when $\beta_1 + \beta_2 > 1$, it is a case of an increasing return to scale.

By keeping K constant, the partial differential equation will be

$$dQ/dL = \beta_1 Q/L$$

which yields

$$Q(l,Ko) = C_1 (Ko) L^{\beta}_1$$

And by keeping L constant, the partial differentiation will yield

$$Q(LoK) = C_2 (Lo)^{\beta}_2$$

Thus, if $\beta_1 + \beta_2 = 1$, then there is a constant return to scale.

Since equation (iii) is not a linear equation, the natural log is used to convert the

equation into linear equation. Therefore, equation (iii) can be rewritten as

$$Ln(Q) = ln(A) + \beta_1 * ln(L) + \beta_2 * ln(K) + e^t$$

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F-test: For two variables F-test is given by the formula

$$F= (ß_1+ ß_2-1)^2 \div (CVL+CVK+2*CVLK)$$

Where,   CVL= Covariance of labour

     CVK= Covariance of capital

     CVLK= Covariance of labour and capital.

CHAPTER II

PROFILE OF MSMEs

Around the world, MSMEs are considered as drivers of economic growth. The dynamic role and performances of MSMEs have ushered economies towards economic growth by contributing hugely to employment, introducing innovative ideas and entrepreneurial skills. MSMEs have occupied a prominent place in the Indian economy. In this chapter, a detailed study of the 85 manufacturing units and 233 service units has been done and also highlighting the types of enterprises, ownership pattern and growth of enterprises. The discussion in this chapter is based on the information gathered from the sample respondents in three towns of Nagaland namely Dimapur, Kohima and Phek which are categorised into micro, small and medium enterprises and further in terms of resource-based enterprises in manufacturing sector and activity-wise enterprises in services sector.

I: Distribution of MSME by category of units

As defined in MSMED Act, 2006, the enterprises are categorised into micro, small and medium enterprises depending on the level of investment in plant and machinery ranging upto the ceiling of Rs.10 crore in manufacturing sector and Rs. 5 crore in services sector.

Table II.1: Distribution of MSMEs by category of units (Types)

Towns	Micro enterprise	Small enterprise	Medium enterprise	Total
Dimapur	81 (57.86)	55 (39.28)	4 (2.86)	140
Kohima	92 (76.03)	22 (18.18)	7 (5.79)	121
Phek	52 (91.23)	5 (8.77)	-	57
Total	225 (70.75)	82 (25.79)	11 (3.46)	318

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.1: Distribution of MSMEs by category of units
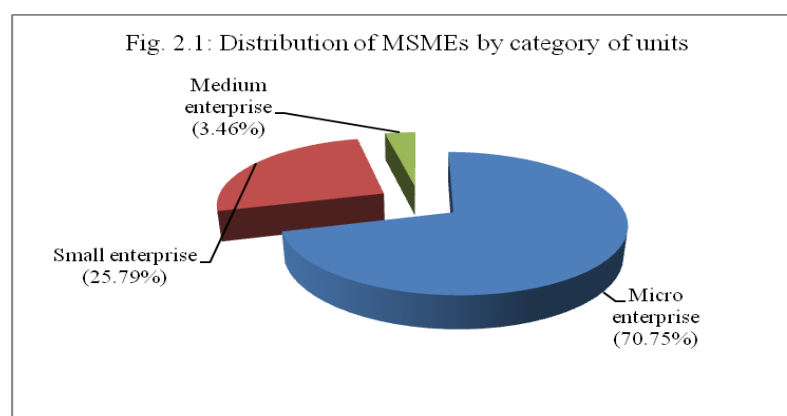
Distribution of MSMEs by category of units shows that 70.75 percent of the enterprises are micro enterprises, 25.79 percent of the enterprises are small enterprises while medium enterprises accounts 3.46 percent of the total enterprises. In Dimapur, micro, small and medium enterprises accounts 57.86 percent, 39.28 percent and 2.86 percent respectively. In Kohima, majority of entrepreneurs concentrate largely on finished goods, therefore, enterprises are concentrated towards micro enterprises which accounts 76.03 percent whereas small and medium enterprises account for 18.18 percent and 5.79 percent respectively. In Phek, micro enterprises dominate with 91.23 percent while 8.77 percent is of small enterprise.

Table II.2: Distribution of enterprises in manufacturing sector

Towns	Micro enterprise	Small enterprise	Medium enterprise	Total
Dimapur	28 (71.79)	11 (28.21)	0	39
Kohima	27 (81.82)	5 (15.15)	1 (3.03)	33
Phek	11 (84.62)	2 (15.38)	0	13
Total	66 (77.64)	18 (21.18)	1 (1.18)	85

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.2: Distribution of enterprises in manufacturing sector
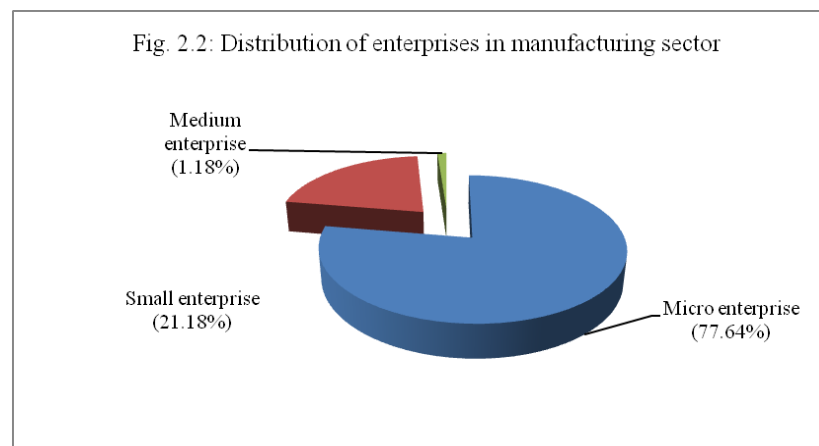
Out of the total 85 manufacturing units, 77.64 percent of the units fall under micro enterprises, 21.18 percent under small and 1.18 percent under medium enterprises. In Dimapur, micro enterprises account for 71.79 percent of manufacturing enterprises and small enterprises 28.21 percent of manufacturing enterprises. In Kohima, micro enterprises account 81.82 percent of manufacturing enterprises, small enterprises 15.15 percent of manufacturing enterprises and medium enterprises 3.03 percent of manufacturing enterprises. In Phek, micro enterprises account 84.62 percent of manufacturing enterprises and small enterprises 15.38 percent of manufacturing enterprises. The distribution of micro enterprises among the three towns shows that Dimapur accounts 42.42 percent, Kohima 40.91 percent and Phek 16.67 percent.

Likewise, the distribution of small enterprises shows that Dimapur accounts 61.11 percent, Kohima 27.78 percent and Phek 11.11 percent.

Table II.3: Distribution of enterprises in services sector

Towns	Micro enterprise	Small enterprise	Medium enterprise	Total
Dimapur	53 (52.48)	44 (43.56)	4 (3.96)	101
Kohima	65 (73.86)	17 (19.32)	6 (6.82)	88
Phek	41 (93.18)	3 (6.82)	0	44
Total	159 (68.24)	64 (27.47)	10 (4.29)	233

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.3: Distribution of enterprises in services sector
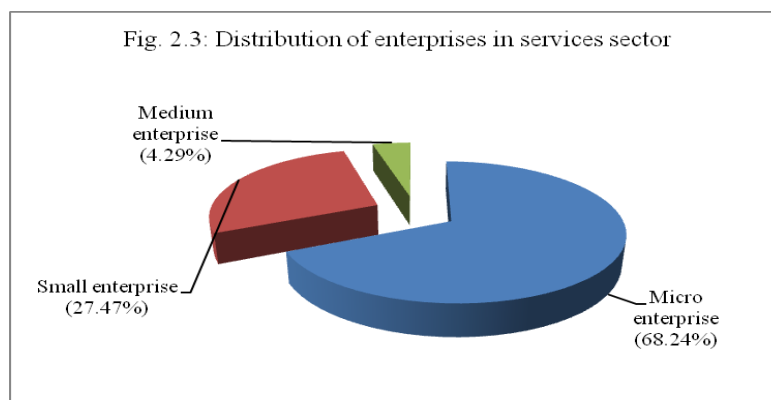
Out of the total 233 service units 68.24 percent of the enterprises are in the category of micro enterprises, 27.47 percent small enterprises and 4.29 percent medium enterprises. In Dimapur, micro enterprises account for 52.48 percent of service enterprises, small enterprises 43.56 percent of service enterprises and medium enterprises 3.96 percent of service enterprises. In Kohima, micro enterprises account for 73.86 percent of service enterprises, small enterprises 19.32 percent of service enterprises and medium enterprises 6.82 percent of service enterprises. In Phek, micro enterprises account for 93.18 percent of service enterprises and small enterprises 6.82 percent of service enterprises. The distribution in the three towns shows that Dimapur

comprises 33.33 percent of micro enterprises, Kohima 40.88 percent and Phek 25.79 percent of micro enterprises. Likewise, the distribution in small enterprises show that Dimapur accounts for 68.75 percent, Kohima 26.56 percent and Phek 4.69 percent. Similarly, in medium enterprises, 40 percent of enterprises are in Dimapur and 60 percent of enterprises are in Kohima.

II: Nature of activities

Enterprises are broadly classified into manufacturing sector and services sector depending on the nature of activities. Nature of activities is the economic activities undertaken by enterprises. It also means specific action which an enterprise partakes for making earnings.

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                          ┌──────────────┐
                          │  Activities  │
                          └──────┬───────┘
              ┌──────────────────┴───────────────────┐
     ┌────────────────────┐               ┌──────────────────┐
     │ Manufacturing Sector│               │  Services Sector │
     └─────────┬──────────┘               └────────┬─────────┘
      ┌────────┼────────┐                           │
┌───────────┐┌───────────┐┌───────────┐      ┌──────────┐
│Forest-based││Mineral-based││Agro-based │      │  Shops   │
│& allied   ││ & allied  ││ & allied  │      │Transport │
└─────┬─────┘└─────┬─────┘└─────┬─────┘      │Workshops │
┌───────────┐┌───────────┐┌───────────┐      │  Hotels  │
│ Saw mill  ││  Quarry   ││  Poultry  │      └──────────┘
│ Furniture ││Metal-based││  Piggery  │
│Handicrafts││Mineral water││Floriculture│
│           ││Cement crafts││ Plantation│
│           ││  Bricks   ││           │
└───────────┘└───────────┘└───────────┘
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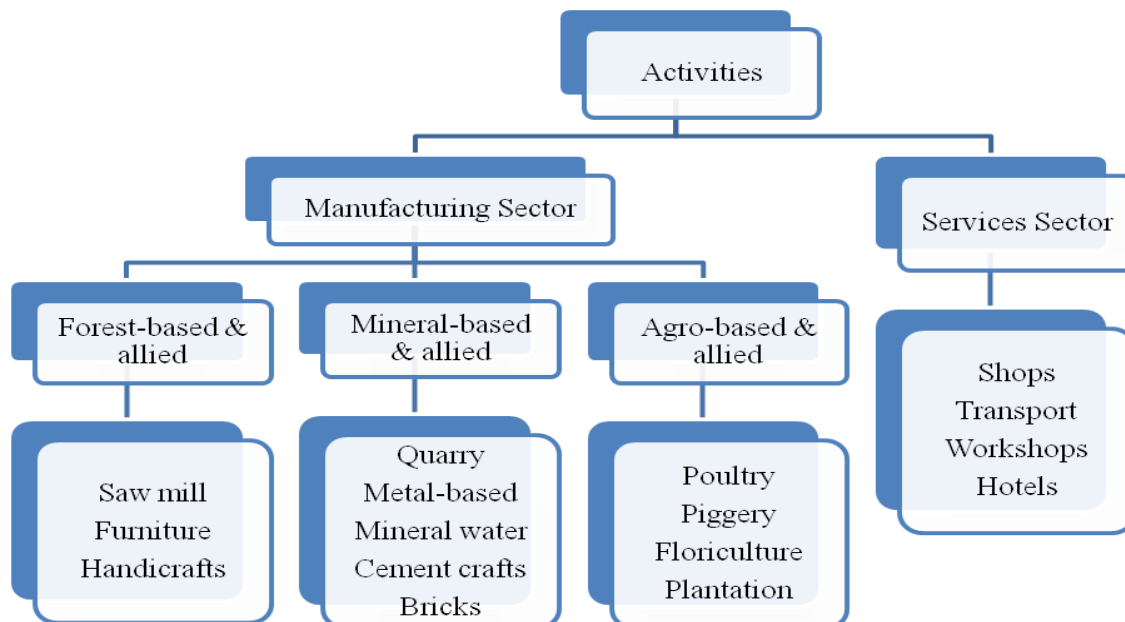
In manufacturing sector, the study identified 16 activities which are categorised into producing units and farming and allied activities. Producing units and allied

activities include fabrication, furniture, saw-mill, handicrafts/ weaving, quarry and food products etc. farming and allied activities includes poultry, piggery, plant nursery, floriculture and plantation.

Table II.4: Activity-wise enterprises in manufacturing sector

Activities	No. of units	Activities	No. of units
Fabrication	4 (4.71)	Steel Trunk	3 (3.53)
Furniture	11(12.94)	Cement crafts	4 (4.71)
Saw mill	5 (5.88)	Food products	4 (4.71)
Quarry	14 (16.47)	Poultry	3 (3.53)
Handicrafts	9 (10.59)	Piggery	4 (4.71)
Bricks	3 (3.53)	Nursery	2 (2.35)
Mineral water	2 (2.35)	Floriculture	6 (7.06)
Tyre crafts	3 (3.53)	Plantation	8 (9.41)
Total			**85 (100)**

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.4: Activity-wise enterprises in manufacturing sector
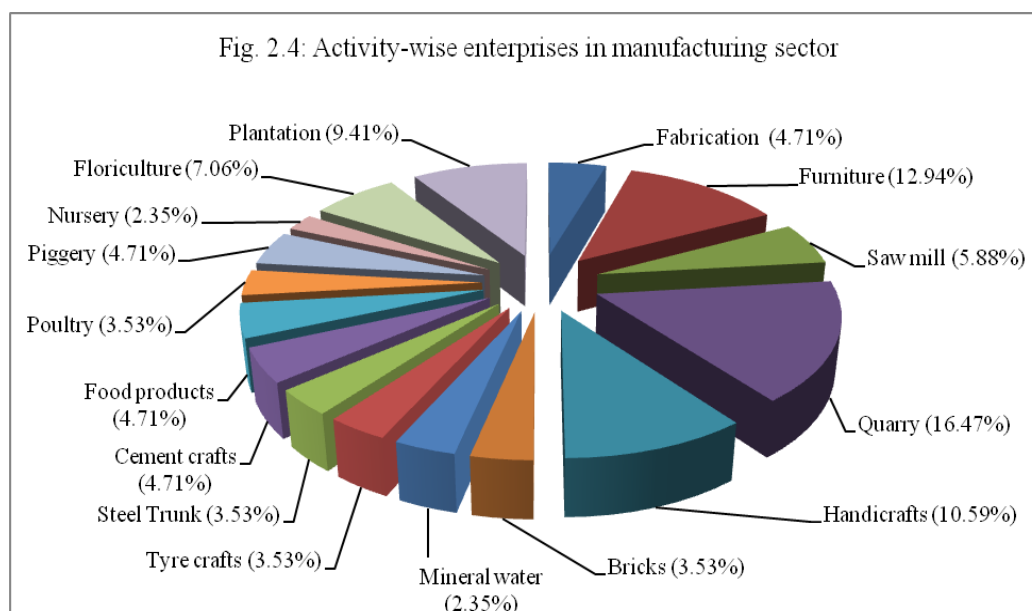
Activity- wise distribution of enterprises in manufacturing sector is shown in table II.4. The share of different activities in manufacturing sector consists of 4.71 percent of fabrication, 12.84 percent of furniture, 5.88 percent of saw mill, 16.47

percent of quarry, 10.58 percent of handicrafts, 3.53 percent of bricks making, 2.35 percent of mineral water, 3.53 percent of tyre crafts, 3.53 percent of trunk making, 4.71 percent of cement crafts, 4.71 percent of food products, 3.53 percent of poultry, 4.71 percent of piggery, 2.35 percent of plant nursery and 7.06 percent of floriculture and 9.41 percent of plantation.

Table II.5: Activity-wise enterprises in manufacturing sector in Dimapur

Activities	No. of units	Activities	No. of units
Fabrication	1 (2.56)	Steel Trunk	2 (5.13)
Furniture	8 (20.51)	Cement crafts	4 (10.26)
Saw mill	2 (5.13)	Poultry	1 (2.56)
Quarry	2 (5.13)	Piggery	2 (5.13)
Handicrafts	3 (7.69)	Nursery	2 (5.13)
Bricks	3 (7.69)	Plantation	4 (10.26)
Mineral water	2 (5.13)	-	-
Tyre crafts	3 (7.69)	**Total**	**39 (100)**

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.5: Activity-wise enterprises in manufacturing sector in Dimapur
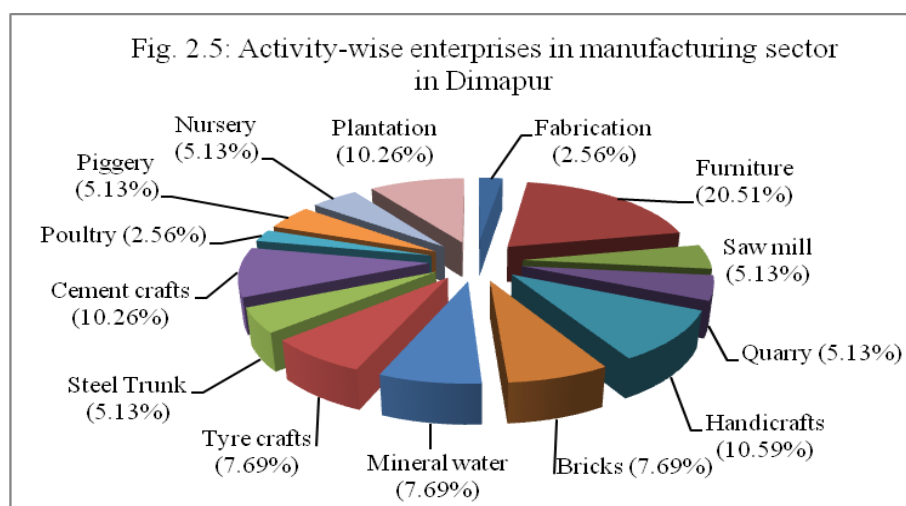
In Dimapur, fabrication accounts 2.56 percent of manufacturing enterprises, furniture accounts for 20.51 percent, saw-mill 5.13 percent, quarry 5.13 percent,

handicrafts 7.69 percent, bricks making 7.69 percent, mineral water 5.13 percent, tyre crafts 7.69 percent, steel trunk making 5.13 percent, cement crafts 10.26 percent, poultry 2.56 percent, piggery 5.13 percent, plant nursery 5.13 percent and plantation 10.26 percent.

Table II.6: Activity-wise enterprises in manufacturing sector in Kohima

Activities	No. of units	Activities	No. of units
Fabrication	3 (9.09)	Poultry	1(3.03)
Furniture	2 (6.06)	Piggery	2 (6.06)
Saw mill	2 (6.06)	Floriculture	6 (18.19)
Quarry	10 (30.30)	Plantation	3 (9.09)
Handicrafts	3 (9.09)	-	-
Steel Trunk	1 (3.03)	**Total**	**33 (100)**

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.6: Activity-wise enterprises in manufacturing sector in Kohima
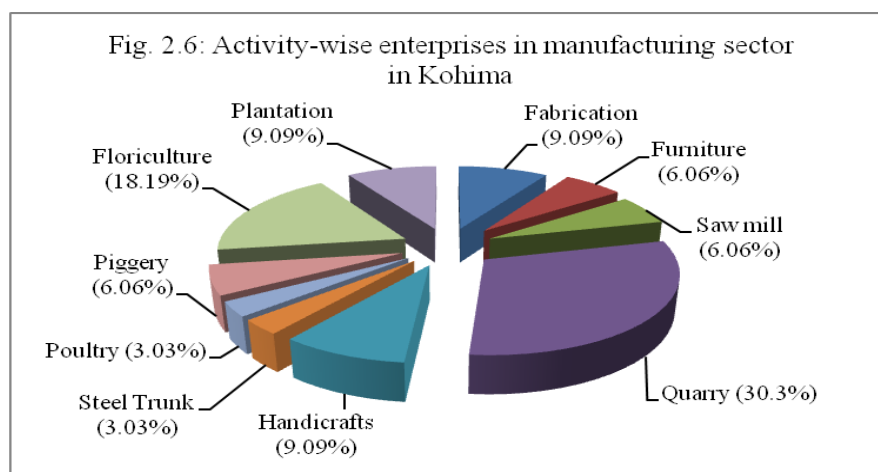
In Kohima, the share of fabrication units is 9 percent, 6 percent each of furniture and saw-mill, 31 percent of quarry, 9 percent of handicrafts, 3 percent of steel trunk making, 3 percent of poultry, 6 percent of piggery, 18 percent of floriculture and 9 percent of plantation. There are no bricks making, tyre crafts, cement crafts and mineral water units in Kohima,

Table II.7: Activity-wise enterprises in manufacturing sector in Phek

Activities	No. of units	Activities	No. of units
Furniture	1 (7.69)	Food products	4 (30.77)
Saw-mill	1 (7.69)	Poultry	1 (7.69)
Quarry	2 (15.39)	Plantation	1 (7.69)
Handicrafts	3 (23.08)	**Total**	**13 (100)**

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.7: Activity-wise enterprises in manufacturing sector in Phek
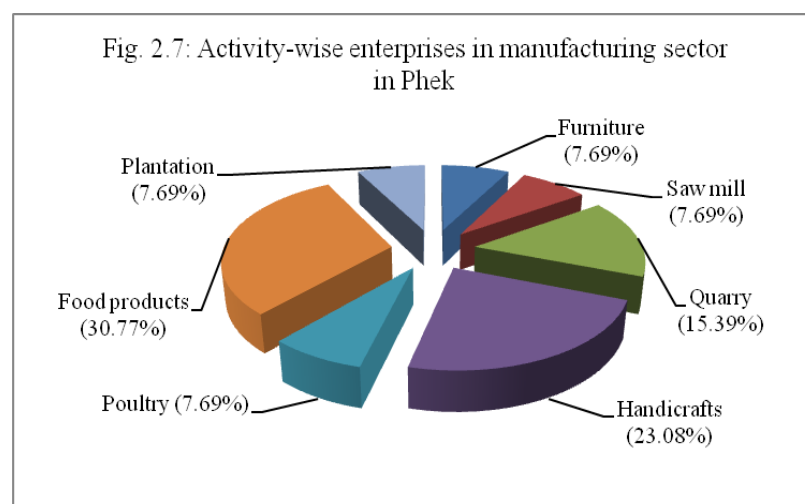
In Phek, furniture accounts for 7.69 percent , saw-mill 7.69 percent, quarry 15.39 percent, handicrafts 23.08 percent, food products 30.77 percent, poultry 7.69 percent, and plantation 7.69 percent. There are no enterprises in fabrication, bricks making, tyre crafts, trunk making, cement crafts and mineral water units, piggery, plant nursery and floriculture in Phek.

The activities of services sector include shops, transport, hotels and restaurants, and workshops/ repair centres. The category of shops activities include automobiles, bakery goods, bricks, sand and cement, butcher, cosmetics, computer, electronics, electrical, flowers, furniture, garments, glass and plywood, grocery, handloom, hardware, kitchen goods, medicine, motor parts, musical instruments, oil and lubricants,

paints, secondhand goods, shoes, sports goods, stationeries and books, studios, variety

shop, vegetables, etc.

Table II.8: Activity-wise enterprises in services sector

Towns	Shops	Transport	Workshops	Hotels	Total
Dimapur	75 (74.26)	12 (11.88)	8 (7.92)	6 (5.94)	101
Kohima	57 (64.77)	11 (12.50)	12 (13.64)	8 (9.09)	88
Phek	31 (70.45)	7 (15.91)	6 (13.64)	-	44
Total	163 (69.96)	30 (12.87)	26 (11.16)	14 (6.01)	233

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.8: Activity-wise enterprises in services sector

Fig. 2.9: Activity-wise enterprises in services sector (Dimapur)

Fig. 2.10: Activity-wise enterprises in services sector (Kohima)

Fig. 2.11: Activity-wise enterprises in services sector (Phek)
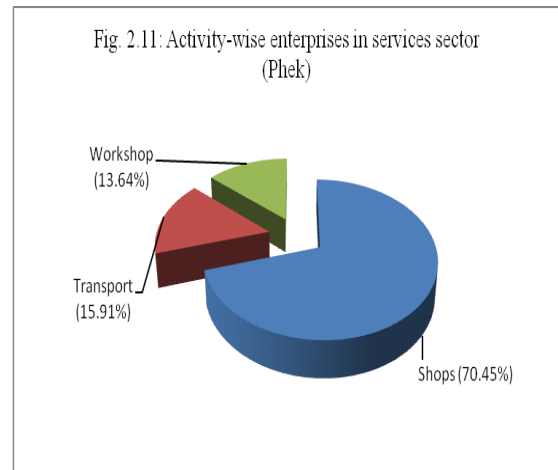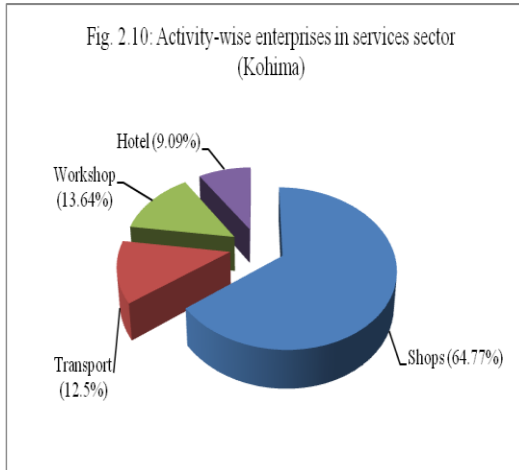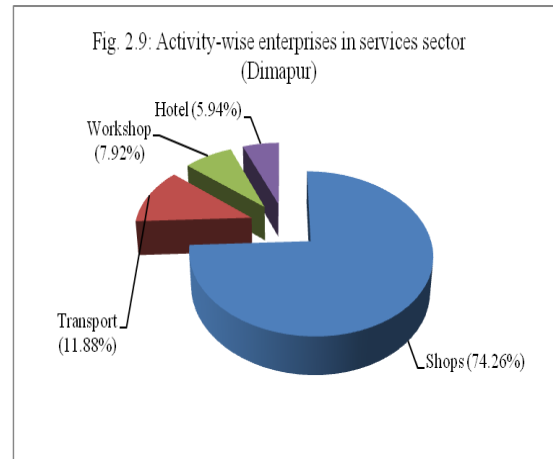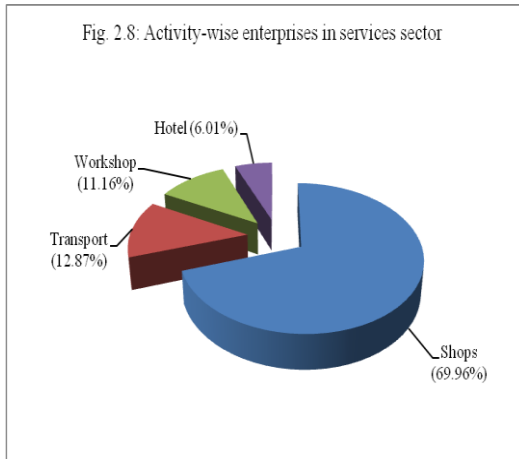
As shown in table II.8, 69.96 percent of the enterprises are engaged in shops, 12.87 percent are engaged in transport, 11.16 percent are engaged in workshops and 6.01 percent are engaged in hotels.

In Dimapur, shops account for 74.26 percent, transport 11.88 percent, workshop 7.92 percent and hotels 5.94 percent in services sector. In Kohima, 57 enterprises of shops account for 64.77 percent, transport 12.50 percent, workshop 13.64 percent and hotels 9.09 percent in services sector. In Phek, shops account for 70.45 percent, of transport 15.91 percent, and workshop 13.64 percent in services sector.

III: Growth of enterprises

A country's general economic health can be measured by looking at its economic growth and development. Economic growth is a vital issue both in economic planning as well as in research and development for policy making. As such, the interest in economic growth for economies around the world is growing fast in view of the fact that there is growing unemployment and poverty problems. Micro, Small and medium enterprises are the backbone of economic development. Small and medium enterprises always represent the model of economic development, which emphasizes high contribution to domestic production, significant export earnings, low investment requirements, employment generation, effective contribution to foreign exchange earning of the nation with low import-intensive operations. This sector is the only solution to the problems of poverty, insecurity, unemployment and over-population (Uma, 2013). SMEs have shown positive impact on economic development as they create new ideas, job opportunities and produce innovative products and services (Gujrati, 2013).

Table II.9: Growth of enterprises

Year	No. of units	Cumulative	Year	No. of units	Cumulative
1980	5	5	2001	4	104
1981	2	7	2002	6	110
1984	1	8	2003	21	131
1985	3	11	2004	4	135
1989	1	12	2005	24	159
1990	13	25	2006	15	174
1992	3	28	2007	8	182
1993	2	30	2008	24	206
1995	16	46	2009	11	217
1996	5	51	2010	38	255
1997	1	52	2011	9	264
1998	7	59	2012	22	286
1999	4	63	2013	21	307
2000	37	100	2014	11	318

Fig. 2.12 :Growth of enterprises
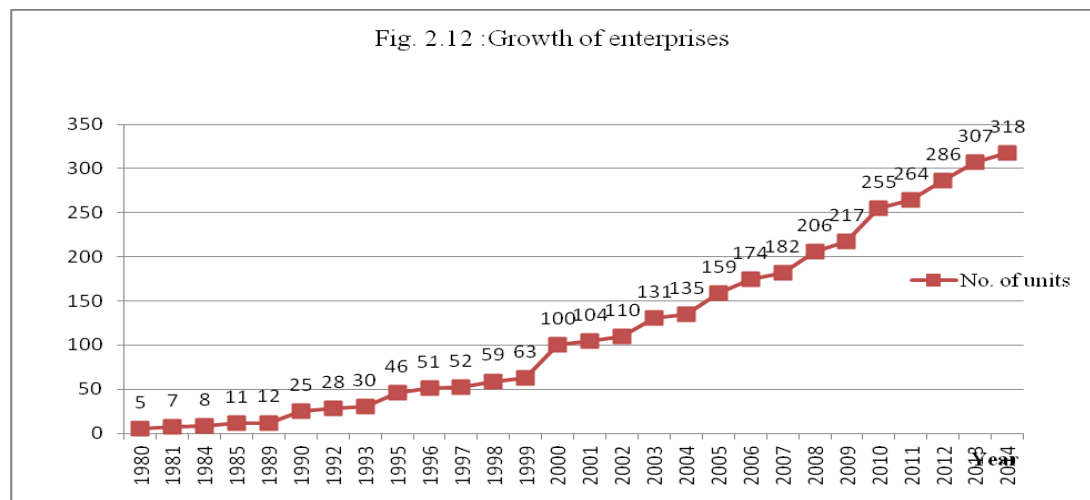
Table II.9 and figure 2.12 show the cumulative growth of MSMEs in the three towns of Nagaland. A total of 318 units were set up, comprising 85 units in the manufacturing sector and 233 units in the services sector. Over the thirty-five years period, the Compound Annual Growth Rate (CAGR) is 12.59 percent. The relatively high growth of enterprises after 1999 can be attributed to the government's initiatives

like implementation of the State Industrial Policy of 2000, the establishment of Entrepreneurs Associates (EA) in 2000, the setting up of North-East Industrial and Investment Policy (NEII) in 2007, formerly known as North-East Industrial Policy (NEIP) - 1997, launching of Industrial Infrastructure Upgradation Scheme (IIUS) in 2003 which is currently known as Modified Industrial Infrastructure Upgradation Scheme (MIIUS)-2013, starting of Business Association of Nagaland (BAN) in 2012, year of the entrepreneur-2010-11, Vision 2020, etc. Another factor responsible for the growth of enterprises is the introduction of Industrial Growth Centre (IGC) to promote industrialisation in backward areas by the Central Government which was commissioned in 2006 in Nagaland. From the year 2000 to 2014, the CAGR is 8.02 percent.

The setting up of Nagaland Tool-Room and Training Centre at Dimapur in 2004, a centrally sponsored scheme, has opened up competition spirit among unemployed youths to equip themselves through short-term job-oriented training. This has resulted in the creation of self-employment. In order to promote industries, the Ministry of Micro, Small and Medium Enterprises (MSME) through the Development Commissioner introduced the Integrated Infrastructural Development (IID) Centre, Kiruphema, to enable the entrepreneurs and industrialists to build their own working sheds.

III.1: Manufacturing Sector

Manufacturing industry plays a key role in driving economic growth and development. A growing manufacturing sector not only stimulates balanced linkage to primary sector but also promotes growth and employment in services sector,

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subsequently, a reduction of poverty. With the process of industrialisation in the eighteenth century, manufacturing is the main engine of economic growth and development. However, this trend has fast vanished. There is no denying that services sector has the larger contribution to the GDP of a country in recent years. This does not necessarily mean that the importance of manufacturing need not be emphasized. Manufacturing has been important for growth in developing countries because structural and infrastructural bases are essential for balanced growth and there is always a linkage among all the sectors of the economy. According to the final results of the Fourth All India Census of MSME, the estimated contribution of manufacturing sector Micro, Small and Medium Enterprises to GDP, during 2012-13, is 7.04 percent. In Nagaland, manufacturing sector contribution to State GDP is 10.16 percent (Quick estimates of 2015-16).

Table III.10: Growth of manufacturing sector

Year	Units	Cumulative	Year	Units	Cumulative
1980	1	1	2004	2	35
1981	2	3	2005	14	49
1990	3	6	2006	4	53
1993	1	7	2007	3	56
1995	4	11	2008	6	62
1996	1	12	2009	4	66
1998	1	13	2010	10	76
1999	1	14	2011	2	78
2000	12	26	2012	4	82
2002	1	27	2013	2	84
2003	6	33	2014	1	85

Fig. 2.13: Growth of manufacturing sector

Table II.10 and figure 2.13 reveal the growing trend of manufacturing units in the three towns. During the thirty-five year period, a total of eighty-five manufacturing units were established. A district wise break up of manufacturing units shows that 39 units are in Dimapur, 33 units in Kohima and 13 units in Phek. The CAGR for the period from 1980 to 2014 is 13.53 percent. A break-up of this period shows that from 1980 to 1999, the CAGR is 14.11 percent and from 2000 to 2014 is 8.22 percent.

Table II.11: Growth of manufacturing sector in Dimapur

Year	No. of units	Cumulative	Year	No. of units	Cumulative
1990	3	3	2007	2	23
1995	2	5	2008	4	27
2000	7	12	2009	1	28
2003	1	13	2010	8	36
2005	7	20	2012	2	38
2006	1	21	2013	1	39

In Dimapur, 39 units account 45.88 percent of the total enterprises in the manufacturing sector. The CAGR from 1980 to 2014 is 10.8 percent. This shows that the compound annual growth rate is lower than the overall manufacturing growth rate.

Table II.12: Growth of manufacturing sector in Kohima

Year	No. of units	Cumulative	Year	No. of units	Cumulative
1995	2	2	2006	3	22
1996	1	3	2007	1	23
1999	1	4	2008	2	25
2000	5	9	2009	3	28
2003	4	13	2010	2	30
2004	2	15	2011	1	31
2005	4	19	2012	2	33

In Kohima, 33 units account 38.82 percent of the total enterprises in manufacturing sector. The CAGR from 1995 to 2012 shows that manufacturing sector is growing at 16.85 percent. The trend also shows that till 1999, the CAGR of manufacturing sector is 14.87 percent and from 2000 till 2012, it is 10.51 percent.

Phek with 13 units accounts 15.29 percent of the total enterprises of the total manufacturing sector. The CAGR shows that manufacturing sector is growing at 7.6 percent from 1980 till 2014. Phek is lagging behind due to poor road connectivity, poor market, poor infrastructure and rural to urban migration.

Table II.13: Growth of manufacturing sector in Phek

Year	No. of units	Cumulative	Year	No. of units	Cumulative
1980	1	1	2003	1	7
1981	2	3	2005	3	10
1993	1	4	2011	1	11
1998	1	5	2013	1	12
2002	1	6	2014	1	13

III.2: Services Sector

Services sector plays a key role in developed and developing economies. The epoch of economic liberalization has ushered in a rapid change in services sector industry. As a result, over the years, India is witnessing a transition from agro-based economy to a knowledge-based economy. The knowledge-based economy disseminates and uses knowledge to enhance its growth and development. The share of services sector in the real Gross Domestic Product (GDP) in India has surpassed that of agriculture and industry. According to the final results of the Fourth All India Census of MSME, the estimated contribution of services sector Micro, Small and Medium Enterprises to GDP during 2012-13 is 30.50 percent.

In a three-sector economy, demand for services is a function of outputs generated by agriculture and industry. So, services sector alone cannot sustain its growth in the long run due to the high backward and forward linkages of agricultural and industrial sector. Services sector is dependent on the growth of agriculture and industry and growth in this sector can also complement growth in the manufacturing sector.

The world economy is undergoing three phases of transition. The first was the dominance of agriculture in the development of the economy. The second is with the process of industrialisation, the emergence of manufacturing sector. The third is the emergence of the service-producing sector as a dominant player in terms of contribution to economic development.

In Nagaland, the sector-wise contribution to the economy indicates that services sector has contributed the maximum that is 59.02 percent in 2015-16 (Quick estimates), to the State GDP among the three sectors viz. agriculture, industry and services.

Table II.14: Growth of services sector

Year	Units	Cumulative	Year	Units	Cumulative	Year	Units	Cumulative
1980	4	4	1997	1	40	2006	11	121
1984	1	5	1998	6	46	2007	5	126
1985	3	8	1999	3	49	2008	18	144
1989	1	9	2000	25	74	2009	7	151
1990	10	19	2001	4	78	2010	28	179
1992	3	22	2002	5	83	2011	7	186
1993	1	23	2003	15	98	2012	18	204
1995	12	35	2004	2	100	2013	19	223
1996	4	39	2005	10	110	2014	10	233

Fig. 2.14: Growth of services sector

In services sector, 233 units were established over the given period as is shown in table II.14. A district wise break up indicates that 101 units are in Dimapur, 88 units in Kohima and 44 units in Phek as is shown in the tables II.15, II.16 and II.17 respectively. The CAGR from 1980 to 2014 is 12.31 percent. There is a sudden rise in the growth of enterprises by 51.02 percent in the year 2000. As compared with manufacturing sector, services sector enterprises require less start-up capital and fixed investment, therefore the number of unit in services sector is more. A developed economy can produce enough goods and services to sustain and promote services

sector. This has helped many economies to see that the services sector's contribution to GDP is higher.

Dimapur which accounts 43.35 percent of the total services enterprises is growing at a Compound Annual Growth Rate of 14.09 percent over the thirty-five years period. Being a commercial hub of the state and the only town in the state being connected with air and railways, Dimapur is faring well in the growth of enterprises.

Table II.15: Growth of services sector in Dimapur

Year	No. of units	Cumulative	Year	No. of units	Cumulative
1980	1	1	2005	4	48
1985	2	3	2006	2	50
1990	5	8	2007	1	51
1995	7	15	2008	15	66
1996	2	17	2009	2	68
1998	4	21	2010	19	87
1999	1	22	2011	3	90
2000	12	34	2012	5	95
2001	2	36	2013	1	96
2002	2	38	2014	5	101
2003	6	44			

Kohima which accounts 37.85 percent of the total services enterprises is growing at a Compound Annual Growth Rate of 15.54 percent over the thirty-one years period. Being the state capital, Kohima is also fast growing. Till 1999, the CAGR is 18.44 percent. With the government initiatives towards entrepreneurship in 1999 and 2000, the environment turned on to the favour of business establishment which resulted in the growth of enterprises.

Table II.16: Growth of services sector in Kohima

Year	No of units	Cumulative	Year	No of units	Cumulative
1984	1	1	2003	6	32
1985	1	2	2004	1	33
1989	1	3	2005	4	37
1990	4	7	2006	7	44
1992	2	9	2007	4	48
1995	1	10	2008	2	50
1996	1	11	2009	3	53
1998	2	13	2010	8	61
1999	2	15	2011	3	64
2000	9	24	2012	10	74
2001	1	25	2013	11	85
2002	1	26	2014	3	88

Phek which accounts 18.90 percent of the total services enterprises is growing at a Compound Annual Growth Rate of 7.96 percent over the thirty-five years period. The nature of establishing MSME units is not so complex compared to establishing large scale industries and as such, there is wide-spread dispersal of the units in the state. In the case of Phek, being a rural township, the growth of enterprises is slow as compared to Dimapur and Kohima.

Table II.17: Growth of services sector in Phek

Year	No. of units	Cumulative	Year	No. of units	Cumulative
1980	3	3	2004	1	22
1990	1	4	2005	2	24
1992	1	5	2006	2	26
1993	1	6	2008	1	27
1995	4	10	2009	3	30
1996	1	11	2010	1	31
1997	1	12	2011	1	32
2000	4	16	2012	3	35
2001	2	18	2013	7	42
2003	3	21	2014	2	44

IV: Ownership of MSMEs

Organisational form of a firm or enterprise refers to the type of ownership such as proprietorship, partnership and cooperatives, etc. The organisational pattern of the firms on the basis of their ownership is shown below:
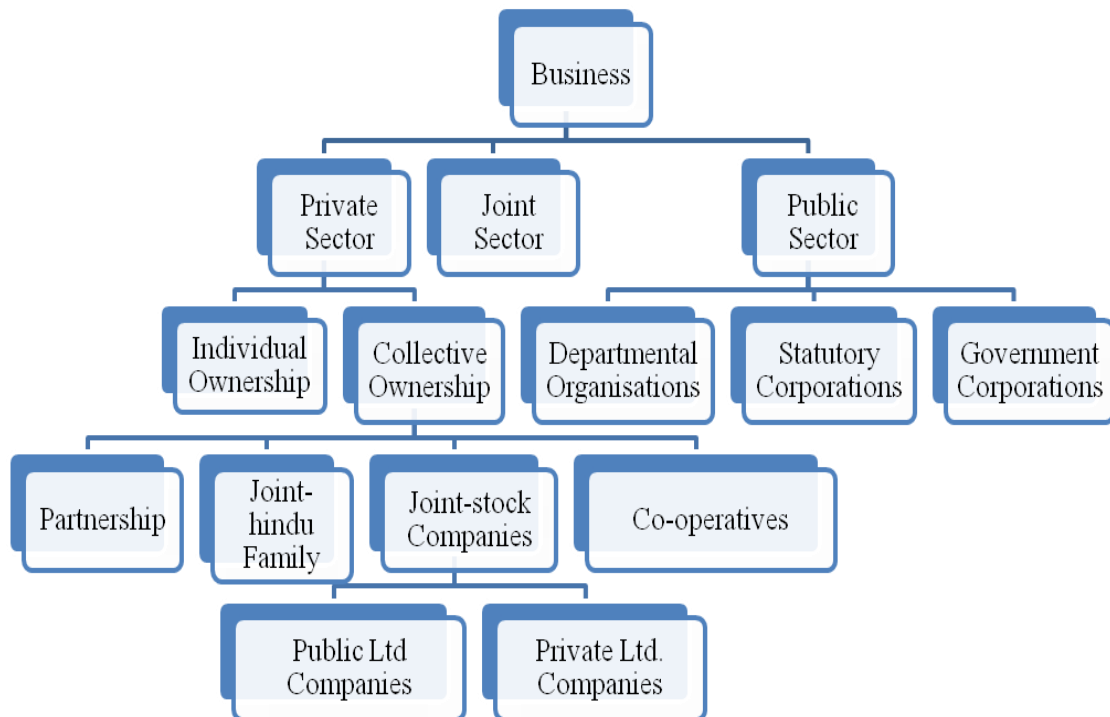
Organisational form of enterprises is structured under sole proprietorship (SP), partnership (PP), cooperative (CO), family (FM) and self-help group (SHG). Sole Proprietorship as individual ownership is the simplest kind of business organisation which is owned and controlled by a single individual. The owner may operate by himself or may employ others. The owner of the business has total and unlimited personal liability of the debts incurred by the business. The sole proprietor is an unincorporated business with one owner who pays personal income tax on profits from the business. With little government regulation, they are the simplest business to set up.

In case of partnership, the firm is owned and managed or controlled jointly by more than one person. As per Section 11 of the Indian Companies Act, 1956, the minimum number of partners is two and the upper limit is twenty. A partnership is a form of business in which two or more people operate for the common goal of making profit. Each partner has total and unlimited personal liability of the debts incurred by the partnership. Partnership is created by mutual consent and voluntary agreement with certain common objectives. Partnership is a type of business organisation in which two or more individuals pool money, skills, and other resources, and share profit and loss in accordance with terms of the partnership agreement.

A cooperative society is a form where people associate voluntarily for the furtherance of common economic interest. The cooperative business structure is for-profit, with limited liability, but with members of the co-operative sharing decision-making authority. It is also defined as firm owned, controlled, and operated by a group of users for their own benefit. Each member contributes equity capital, and shares in the control of the firm on the basis of one-member, one-vote principle.

Family ownership is termed as family enterprises and/ or family firms. In India, it is called as Joint-Hindu family. It represents collective ownership of enterprises, though the nature of business of sole proprietorship and family ownership is almost the same. It falls under the category of private sector. A family enterprise is collective responsibility of members of the family in running the business.

Self-Help Group (SHG) is defined as a small voluntary association of poor people, preferably from the same socio-economic background coming together for the purpose of solving their common problems through self help and mutual help. SHG promotes small savings among its members and undertakes certain economic activities

for their common welfare. A Self-Help Group (SHG) is also defined as a group of about 10 to 20 people, usually women, from a similar class and region, who come together to form savings and credit organisations. They pool financial resources to make interest bearing loans to their members. This process creates an ethic that focuses on savings first. The setting of terms and conditions and accounting of the loan are done in the group by designated members. Self-Help Group may also be referred to as fellowships, peer support groups, lay organisation, mutual help groups, or mutual aid self help groups.

Table II.18: Ownership of MSMEs

Sector	SP	PP	CO	FM	SHG	Total
Manufacturing	75 (88.24)	1 (1.18)	1 (1.18)	2 (2.35)	6 (7.06)	85
Services	213 (91.42)	12 (5.15)	-	7 (3.00)	1 (0.43)	233
Total	288 (90.57)	13 (4.09)	1 (0.31)	9 (2.83)	7 (2.20)	318

Source: field survey
* Figure in parenthesis indicates percentage
* SP= Sole Proprietor, PP= Partnership, CO= Co-operative, FM= Family,
SHG= Self help group

Fig. 2.15: Ownership of MSMEs
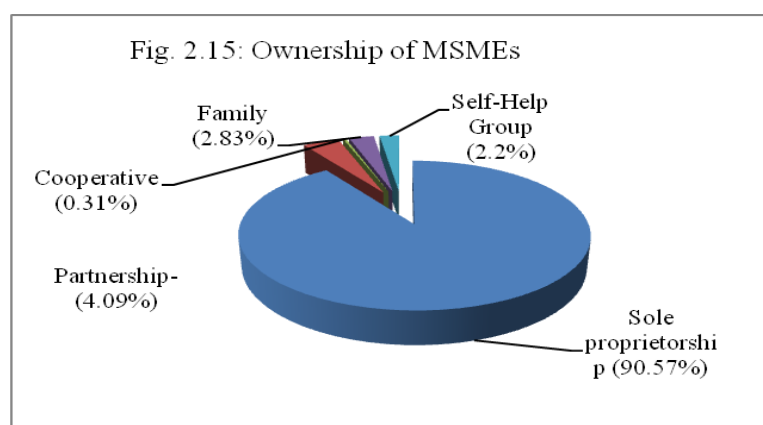
Most of the MSMEs are established by individual and more than 90 percent of the total enterprises are under sole proprietorship and the remaining 10 percent are either owned by partnership, cooperative, family firms or self-help groups (table II.18).

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Table II.19: Ownership in manufacturing sector

Towns	SP	PP	CO	FM	SHG	Total
Dimapur	38 (97.44)	1 (2.56)	-	-	-	39
Kohima	28 (84.85)	-	1 (3.03)	2 (6.06)	2 (6.06)	33
Phek	9 (69.23)	-	-		4 (30.77)	13
Total	75 (88.23)	1 (1.18)	1 (1.18)	2 (2.35)	6 (7.06)	85

Source: field survey
* Figure in parenthesis indicates percentage
* SP= Sole Proprietor, PP= Partnership, CO= Co-operative, FM= Family,
SHG= Self help group

Fig. 2.16: Ownership of manufacturing sector

Fig. 2.17: Ownership of manufacturing sector (Dimapur)

Fig. 2.18: Ownership of manufacturing sector (Kohima)

Fig. 2.19: Ownership of manufacturing sector (Phek)
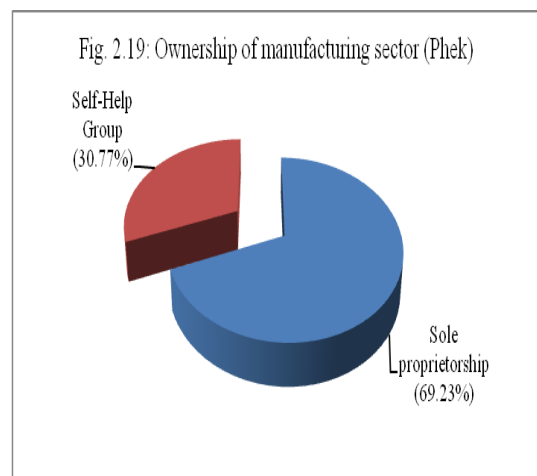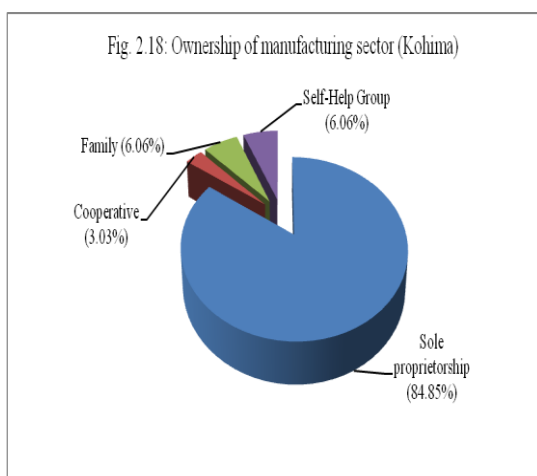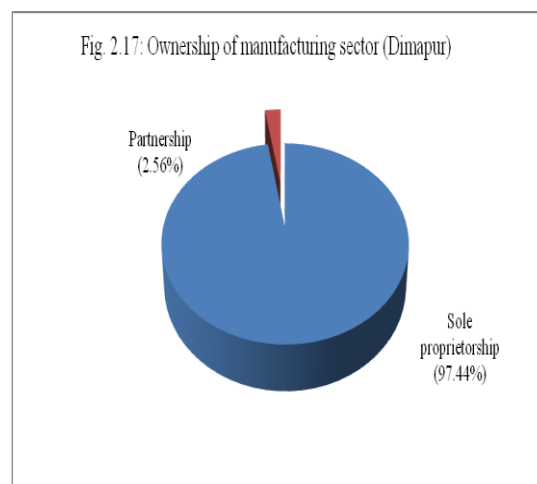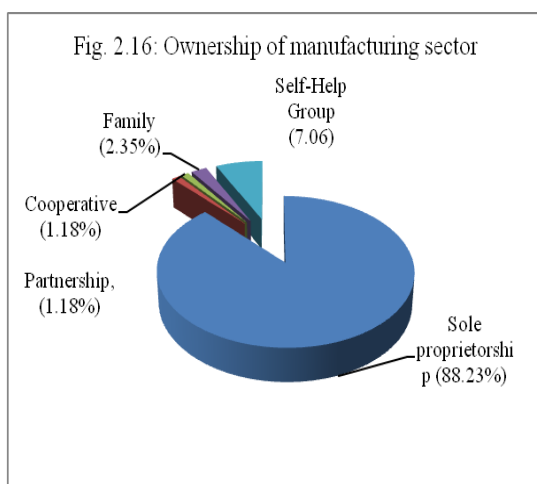
The above table shows that, in manufacturing sector, maximum of the enterprises are owned by proprietorship. Out of 85 units, 88.23 percent are sole proprietory, 1.18 percent each of partnership and cooperative, 2.35 percent of family enterprises and 7.06 percent of Self-Help Groups. This reveals that the state is faring

behind in limited companies. The nature of ownership also reveals that entrepreneurs are not keen on venturing and making the investment to the bigger business establishment which will promote economic development.

As shown in table II.19, in Dimapur, 97.44 percent of enterprises are owned by sole proprietors and 2.56 percent of the enterprises are owned by partnership. There are no units in cooperative, family firms and self-help groups. This indicates that in MSME sector, ownership pattern is subjected towards sole proprietory. This has reflected the mindset of the entrepreneurs because it is easy to establish and the entrepreneurs can have the incentive to earn better income by putting more efforts unlike other forms of ownership.

In Kohima, out of 33 enterprises, more than 80 percent are owned by sole proprietors and remaining 20 percent are spread among cooperative, family enterprises and self-help groups. There is a decline of partnership form of ownership as it runs into risks from lack of mutual trust among partners.

In Phek, out of the 13 units, 69.23 percent are run by sole proprietors and 30.77 percent are run by self-help groups. There are no enterprises under partnership, cooperative and family category. The distribution of ownership is quite visible whereby partnerships and cooperatives are not coming up which reveals the nature of economy which indicates lack of sufficient start-up capital in the manufacturing sector.

Table II.20: Ownership in Services sector

Towns	SP	PP	FA	SHG	Total
Dimapur	89 (88.12)	9 (8.91)	3 (2.97)	-	101
Kohima	81(92.05)	3 (3.41)	4 (4.54)	-	88
Phek	43 (97.73)	-	-	1 (2.27)	44
Total	213 (91.42)	12 (5.15)	7 (3.00)	1 (0.43)	233

Figure in parenthesis indicates percentage
SP= Sole Proprietor, PP= Partnership, CO= Co-operative, FM= Family, SHG= Self help group

Fig. 2.20: Ownership of services sector

Family (3%)

Self-Help Group (0.43)

Partnership (5.15%)

Sole proprietorship (91.42%)

Fig. 2.21: Ownership of services sector (Dimapur)

Family (2.97%)

Partnership (8.91%)

Sole proprietorship (88.12%)

Fig. 2.22: Ownership of services sector (Kohima)

Family, (4.54%)

Partnership (3.41%)

Sole proprietorship (92.05%

Fig. 2.23: Ownership of services sector (Phek)

Self-Help Group (2.27%)

Sole proprietorship (97.72%)
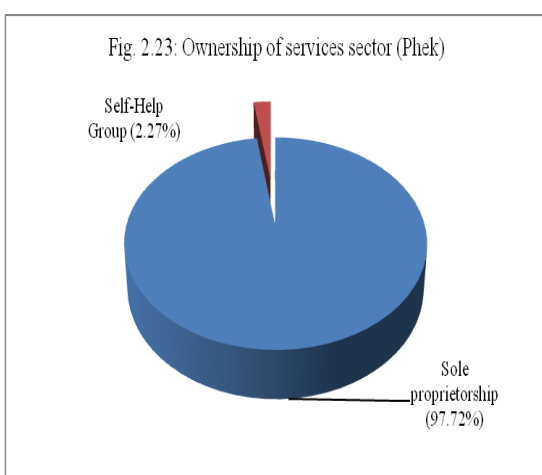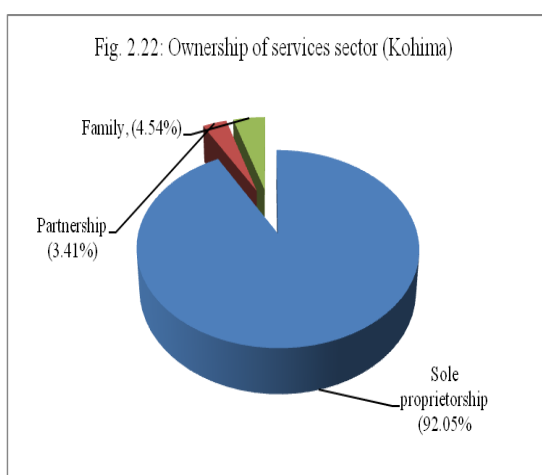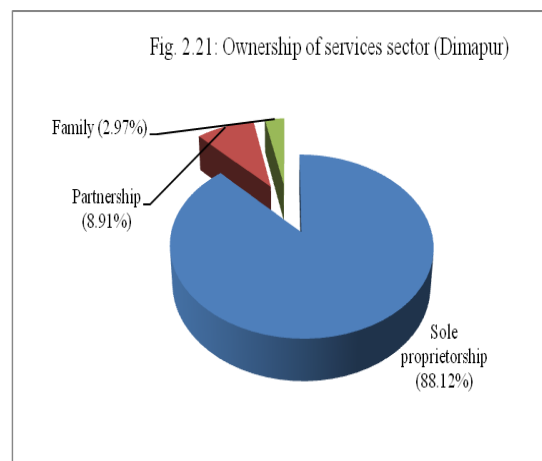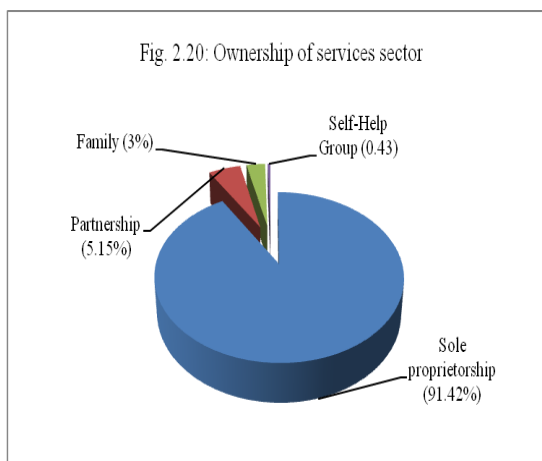
In the services sector, out of 233 enterprises, more than 91 percent of the enterprises are sole proprietorship and the remaining 9 percent are run by partnership, family and self-help group.

In Dimapur, out of 101 units, 88.12 percent are owned by sole proprietors, and the remaining 11.88 percent are owned by partnership and family enterprises. In Kohima, out of the 88 units, 92.05 percent of the units are owned by sole proprietor, 3.41 percent by partnership and 4.54 percent by family enterprises. In the services sector in Phek, out of 44 units, 97.73 percent and 2.27 percent are owned by sole proprietors and self-help groups respectively.

V: Ownership by Gender/ sex

The distribution of ownership by sex implies gender-wise ownership like male and female ownership of business establishments. There are some enterprises owned and managed by partnership, family, self-help group and cooperative societies. These categories are given as 'others'. According to 2011 census, total workers in Nagaland is 7,74,122, comprising of 5,47,357 male workers and 4,26,765 female workers. The work participation rate for the state is 49.2 percent. As per the census of Nagaland government employees-2014, there are 95,903 employees in the government sector of which male employees with 74,355 constitute 77.53 percent of the total employees whereas female employees with 21548 constitute 22.47 percent of the total employees.

Table II.21: Ownership of enterprises by gender

Male	Female	Others	Total
254 (79.87)	35 (11.01)	29 (9.12)	318

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.24: Ownership of enterprises by gender

Others (9.12%)

Female (11.01%)

Male (79.87%)
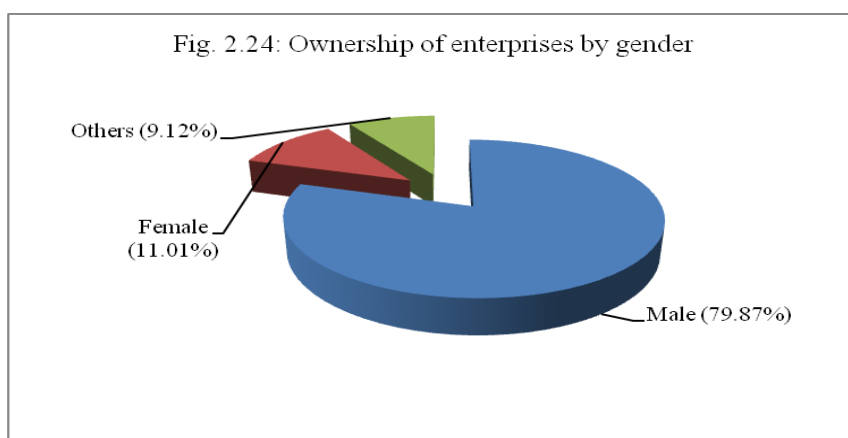
The above table represents gender-wise ownership where 254 enterprises account 79.87 percent of the total enterprises in MSME sector which are owned by males while 35 and 29 enterprises accounting 11.01 percent and 9.12 percent of the total

enterprises in MSMEs are run by females and others respectively. Thus, there is dominance of male ownership in the MSME sector.

Table II.22: Ownership by gender in the manufacturing sector

Towns	Male	Female	Others	Total
Dimapur	38 (97.44)	-	1(2.56)	39
Kohima	20 (60.61)	8 (24.24)	5 (15.15)	33
Phek	8 (61.54)	1 (7.69)	4 (30.77)	13
Total	66 (77.65)	9 (10.59)	10 (11.76)	85

Source: field survey
* Figure in parenthesis indicates percentage

Table II.22 represents ownership by gender in manufacturing sector which shows that the dominance of male ownership is also true in manufacturing sector. Out of 85 enterprises, 77.65 percent of the enterprises are owned by males, 10.59 percent and 11.64 percent of the enterprises are owned by females and others respectively.

Fig. 2.25: Ownership of enterprises by gender in manufacturing sector

Others (1.76%)
Female (10.59%)
Male (77.65%)

Fig. 2.26: Ownership of enterprises by gender in manufacturing sector (Dimapur)

Female (2.56%)
Male (97.44%)

Fig. 2.27: Ownership of enterprises by gender in manufacturing sector (Kohima)

Fig. 2.28: Ownership of enterprises by gender in manufacturing sector (Phek)
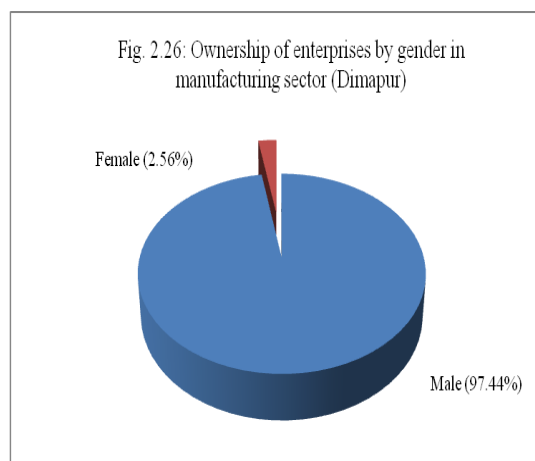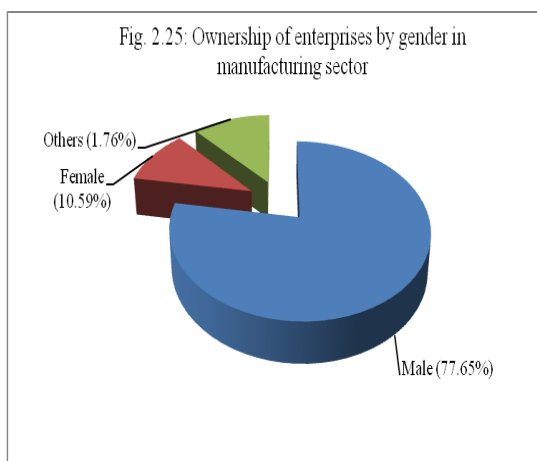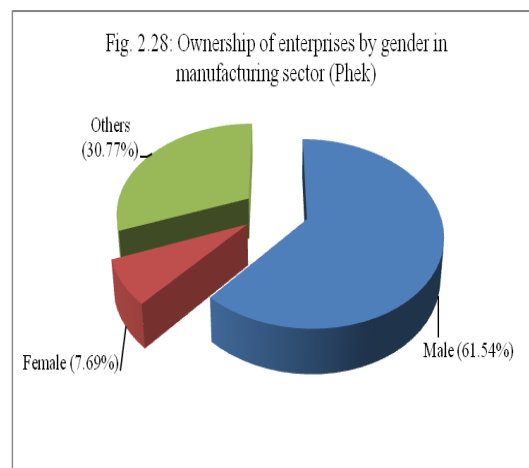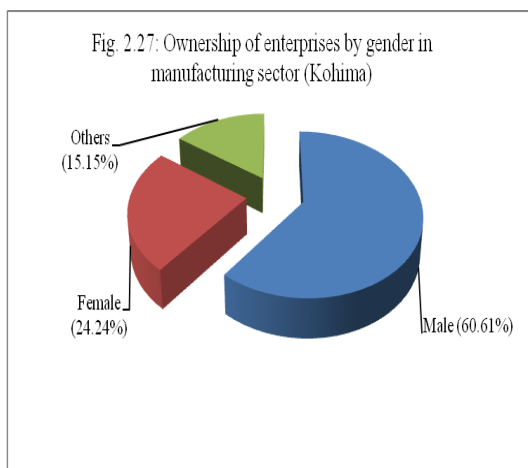
It is observed that, in Dimapur, out of 39 units in manufacturing, 97.44 percent of the enterprises are owned by males and 3.56 percent of the enterprises are owned by 'others' while there is no enterprise owned by female. In Kohima, out of 33 enterprises in manufacturing, 22 enterprises which account 60.61 percent are owned by males, 8 enterprises which account 24.24 percent are owned by females and 15.15 percent of the enterprises are owned by 'others'. In Phek, out of 13 enterprises in manufacturing, 8 enterprises which account 61.54 percent are owned by males, 7.69 percent of the enterprises are owned by females and 30.77 percent of the enterprises are owned by 'others'.

Table II.23: Ownership by gender in services sector

Towns	Male	Female	Others	Total
Dimapur	83 (82.18)	7 (6.93)	11 (10.89)	101
Kohima	68 (77.27)	13 (14.77)	7 (7.96)	88
Phek	37 (84.09)	6 (13.64)	1 (2.27)	44
Total	188 (80.69)	26 (11.16)	19 (8.15)	233

Source: field survey
* Figure in parenthesis indicates percentage

The dominance of male ownership is also prevalent in services sector. Out of 233 enterprises, 80.69 percent are owned and managed by males, 11.16 percent and 8.15 percent by females and 'others' respectively.

Fig. 2.29: Ownership of enterprises by gender in services sector

Others (8.15%)
Female (11.16%)
Male (80.69%)

Fig. 2.30: Ownership of enterprises by gender in services sector (Dimapur)

Others (10.89%)
Female (6.93%)
Male (82.18%)

Fig. 2.31: Ownership of enterprises by gender in services sector (Kohima)

Others (7.96%)
Female (14.77%)
Male (77.27%)

Fig. 2.32: Ownership of enterprises by gender in services sector (Phek)

Others (2.27%)
Female (13.64%)
Male (84.09%)

In Dimapur, out of 101 enterprises, 82.18 percent of the enterprises are owned and managed by males, 6.93 percent and 10.89 percent of the enterprises by females and 'others' respectively. In Kohima, out of 88 enterprises, 77.27 percent of the enterprises are owned and managed by males, 14.77 percent and 7.96 percent of the enterprises by females and 'others' respectively. In Phek, out of 44 enterprises, 84.09 percent of the enterprises are owned and managed by males, 13.64 percent and 2.27 percent of the enterprises by females and 'others' respectively.

VI: Education

Education plays an important role not only in developing the intellectual skills and knowledge of an individual but also for effective growth and development of an economy. Education plays a key role in developing human resources and contributes to economic development through population control, life expectancy, infant mortality, nutritional status and strengthening of other institutions. Education is the most crucial input for empowering people with skills and knowledge and giving them access to productive employment in future. Education helps to improve the efficiency of labour, helps in reducing poverty and ensures the means to attain the goal of opportunity in the society. The higher educational level will not only help towards sustained economic growth but will also help in improving a person's quality of life, improve his communication and participation in community well-being. The higher level of literacy and educational development lead to greater awareness on the one hand and on the other hand, help people in acquiring new skills. Education brings economic benefits to individuals through affecting the marginal productivity of physical capital which reflects the capability of human resources and skills. Education is one of the three dimensions of measuring Human Development Index. Education thus increases all round well-being and development in all spheres of life.

Table II.24: Educational status of entrepreneurs in MSMEs

Sector	Below matric	Matriculate	10+2	Graduate	Post Graduate	Total
Manufacturing	24 (28.24)	24 (28.24)	15 (17.65)	16 (18.82)	6 (7.05)	85
Services	53 (22.75)	63 (27.04)	34 (14.59)	73 (31.33)	10 (4.29)	233
Total	77 (24.21)	87 (27.36)	49 (15.41)	89 (27.99)	16 (5.03)	318

Source: field survey
* Figure in parenthesis indicates percentage
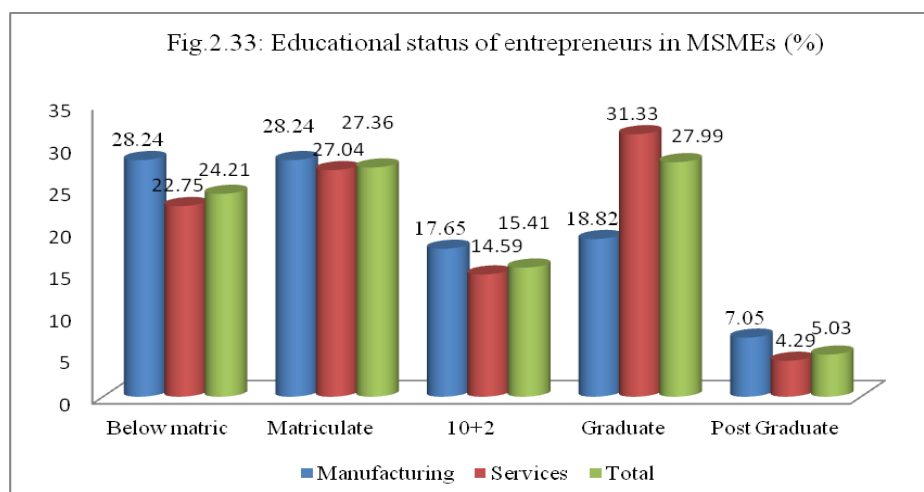
Fig.2.33: Educational status of entrepreneurs in MSMEs (%)

According to the educational status of entrepreneurs, 24.21 percent of the entrepreneurs in the MSME sector are below matric, 27.36 percent of the entrepreneurs are matriculate, 15.41 percent of the entrepreneurs are 10 +2 level, 27.99 percent of the entrepreneurs are graduate and about 5.03 percent of the entrepreneurs are post-graduate.

In manufacturing sector, 28.24 percent of the entrepreneurs are below matric, 28.24 percent of the entrepreneurs are matriculate, 17.65 percent of the entrepreneurs are 10 +2 level, 18.82 percent of the entrepreneurs are graduates and about 7.05 percent of the entrepreneurs are post-graduate. Similarly, in services, 22.75 percent of the entrepreneurs are below matric, 27.04 percent of the entrepreneurs are matriculate, 14.59 percent of the entrepreneurs are 10 +2 level, 31.33 percent of the entrepreneurs are graduates and about 4.29 percent of the entrepreneurs are post-graduate.

Table II.25: Educational status of entrepreneurs in manufacturing sector

Towns	Below matric	Matriculate	10+2	Graduate	Post Graduate	Total
Dimapur	12 (30.77)	12 (30.77)	1 (2.26)	10 (25.64)	4 (10.26)	39
Kohima	8 (24.24)	8 (24.24)	10 (30.30)	5 (15.16)	2 (6.06)	33
Phek	4 (30.77)	4 (30.77)	4 (30.77)	1 (7.69)	-	13
Total	24 (28.24)	24 (28.24)	15 (17.65)	16 (18.82)	6 (7.05)	85

Source: field survey
* Figure in parenthesis indicates percentage

Fig.2.34: Educational status of entrepreneurs in manufacturing sector (%)
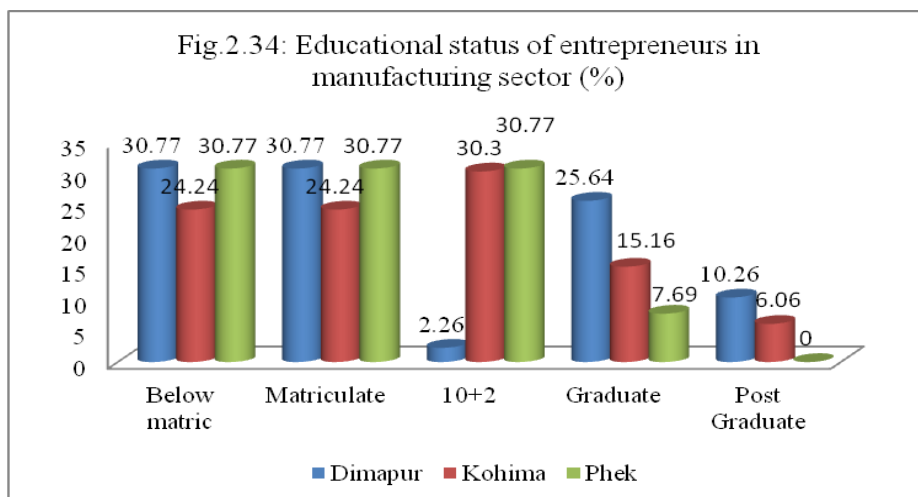
As is shown in table II.25, in Dimapur, out of 39 manufacturing enterprises, 30.77 percent of the entrepreneurs are below matric, 30.77 percent are matriculate, 2.56 percent are 10+2 level, 25.64 percent are graduates and 10.26 percent are post-graduates. In Kohima, out of 33 manufacturing enterprises, 24.24 percent of the entrepreneurs are below matric, 24.24 percent are matriculate, 30.30 percent are 10+2 level, 15.16 percent are graduates and 6.06 percent are post-graduates. In Phek, out of 13 manufacturing enterprises, 30.77 percent of the entrepreneurs are below matric, 30.77 percent are matriculate, 30.77 percent are 10+2 level, 7.69 percent are graduates and there are no entrepreneurs in the category of post-graduates and others.

Table II.26: Educational status of entrepreneurs in services sector

Towns	Below matric	Matriculate	10+2	Graduate	Post Graduate	Total
Dimapur	20 (19.80)	22 (21.78)	16 (15.84)	39 (38.62)	4 (3.96)	101
Kohima	15 (17.05)	26 (29.55)	14 (15.91)	27 (30.68)	6 (6.82)	88
Phek	18 (40.91)	15 (34.09)	4 (9.09)	7 (15.91)	-	44
Total	53 (22.75)	63 (27.04)	34 (14.59)	73 (31.33)	10 (4.29)	233

Source: field survey
* Figure in parenthesis indicates percentage

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Fig.2.35: Educational status of entrepreneurs in services sector (%)
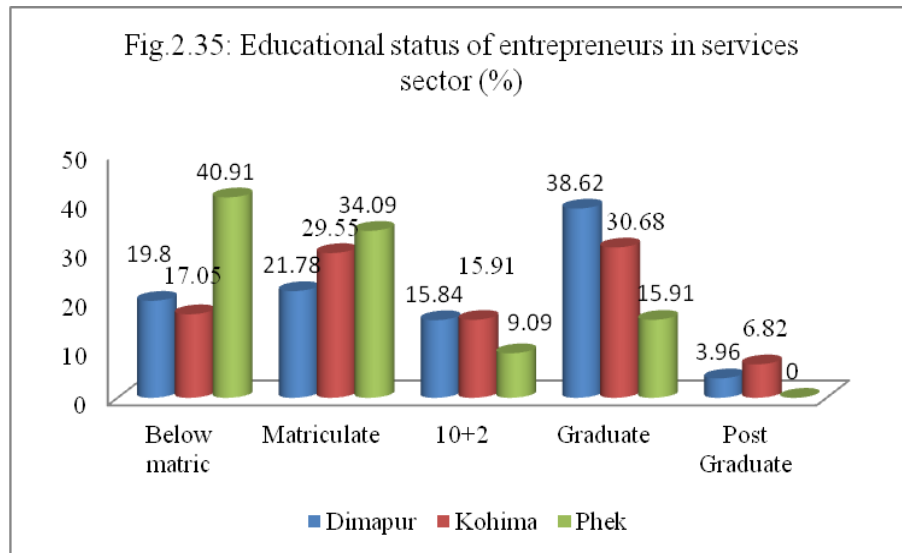
In Dimapur, out of 101 services enterprises, 19.80 percent of the entrepreneurs are below matric, 21.78 percent are matriculate, 15.84 percent are 10+2 level, 38.62 percent are graduates, 3.96 percent are post-graduates and there are no units in the category of others. In Kohima, out of 88 services enterprises, 17.05 percent of the entrepreneurs are below matric, 29.55 percent are matriculate, 15.91 percent are 10+2 level, 30.68 percent are graduates, 6.82 percent are post-graduates, and there are no units in the category of others. In Phek, out of 44 services enterprises, 40.91 percent of the entrepreneurs are below matric, 34.09 percent are matriculate, 9.09 percent is 10+2 level, 15.91 percent are graduates, and there are no entrepreneurs in the category of post-graduates and others.

VII: Age composition/ age structure

Age composition is also known as age distribution in demographic studies. Age composition will mean distribution of enterprises by age of the entrepreneurs. It shows the age structure in doing businesses at different levels of age.

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Table II.27: Ownership of MSMEs by entrepreneur's age

Entrepreneurs' Age Group	20-30	30-40	40-50	50+	Total
Manufacturing	4 (4.71)	14 (16.47)	32 (37.65)	35 (41.17)	85
Services	20 (8.58)	59 (25.32)	76 (32.62)	78 (33.48)	233
Total	24 (7.55)	73 (22.96)	108 (33.96)	113 (35.53)	318

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.36: Ownership of enterprises by entrepreneur's age (%)
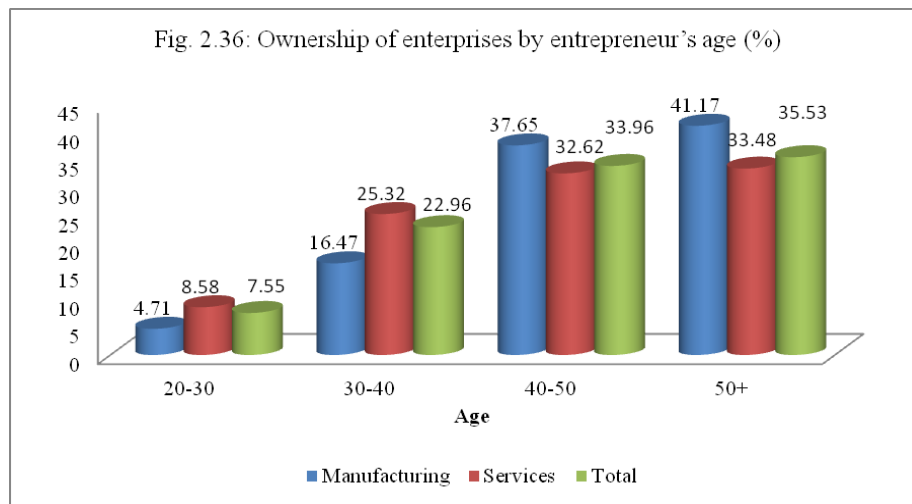
Ownership of enterprises by age of the entrepreneurs as shown in the above table indicates that 24 units which accounts 7.55 percent of the total units are run by entrepreneurs in the age group of 20-30 years, 73 units which accounts 22.96 percent are run by entrepreneurs in the age group of 30-40 years, 108 units which accounts 33.96 percent are run by entrepreneurs in the age group of 40-50 years and 113 units which accounts 35.53 percent are run by entrepreneurs in the age group of 50 years and above.

Table II.28: Distribution of manufacturing enterprises by age of entrepreneurs

Age	20-30	30-40	40-50	50+	Total
Dimapur	2 (5.13)	3 (7.69)	15 (38.46)	19 (48.72)	39
Kohima	2 (6.06)	7 (21.22)	12 (36.36)	12 (36.36)	33
Phek	0	4 (30.77)	5 (38.46)	4 (30.77)	13
Total	4 (4.71)	14 (16.47)	32 (37.65)	35 (41.17)	85

* Figure in parenthesis indicates percentage

Fig. 2.37: Distribution of manufacturing enterprises by age of entrepreneurs (%)
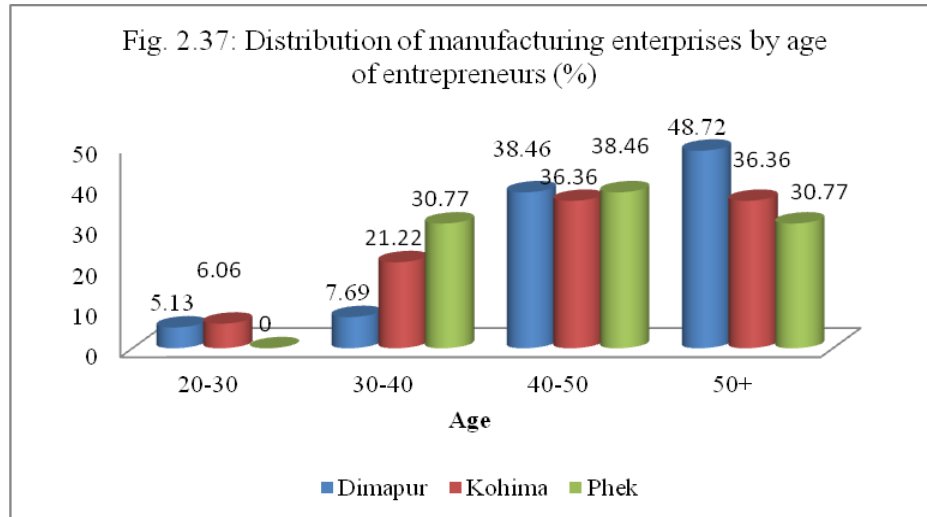
In the manufacturing sector, 4.71 percent of the entrepreneurs are in the age group of 20-30 years, 16.47 percent of the entrepreneurs in the age group of 30-40 years, 38.65 percent of the entrepreneurs in the age group of 40-50 years and 41.17 percent of the entrepreneurs in the age group of 50 years and above. In Dimapur, 5.13 percent of manufacturing entrepreneurs are in the age group of 20-30 years, 7.69 percent in the age group of 30-40 years, 38.46 percent in the age group 40-50 years and 48.72 percent in the age group of 50 years and above. Likewise, in Kohima, 6.06 percent of manufacturing entrepreneurs are in the age group of 20-30 years, 21.22 percent in the age group of 30-40 years, 36.36 percent in the age group of 40-50 years and 36.36 percent in the age group of 50 years and above. Similarly, in Phek, 30.77 percent of the entrepreneurs are in the age group of 30-40 years, 38.46 percent in the age group of 40-50 years and 30.77 percent in the age group of 50 years and above.

Table II.29: Distribution of service enterprises by age of entrepreneurs

Age	20-30	30-40	40-50	50+	Total
Dimapur	10 (9.90)	17 (16.83)	33 (32.67)	41 (40.60)	101
Kohima	4 (4.55)	31 (35.22)	27 (30.68)	26 (29.55)	88
Phek	6 (13.64)	11 (25.00)	16 (36.36)	11 (25.00)	44
Total	20 (8.58)	59 (25.32)	76 (32.62)	78 (33.48)	233

Source: field survey
* Figure in parenthesis indicates percentage

Fig. 2.38: Distribution of service enterprises by age of entrepreneurs (%)
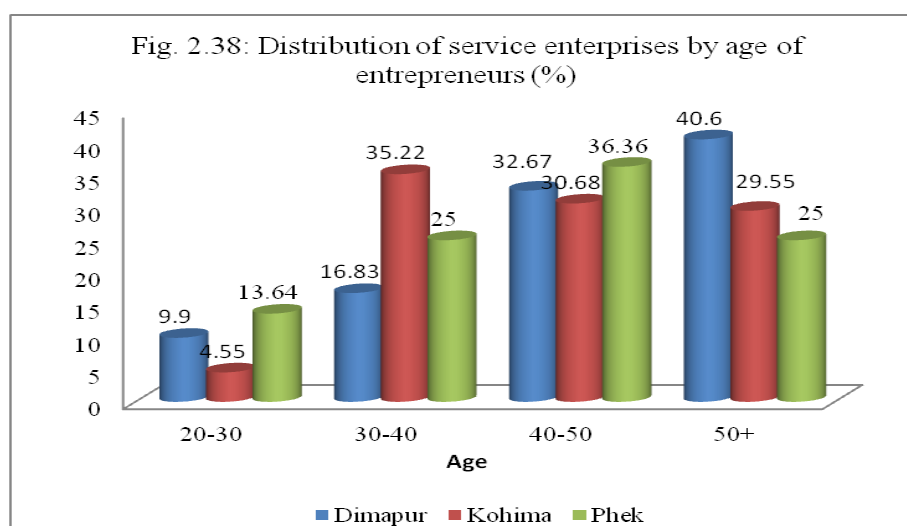
In the service sector, 8.58 percent of the entrepreneurs are in the age group of 20-30 years, 25.32 percent in the age group of 30-40 years, 32.62 percent in the age group of 40-50 years and 33.48 percent in the age group of 50 years and above. The town-wise distribution shows that in Dimapur, 9.90 percent of services entrepreneurs are in the age group of 20-30 years, 16.83 percent in the age group of 30-40 years, 32.67 percent in the age group of 40-50 years and 40.60 percent in the age group of 50 years and above. Likewise, in Kohima, 4.55 percent of services entrepreneurs are in the age group of 20-30 years, 35.22 percent in the age group of 30-40 years, 30.68 percent in the age group of 40-50 years and 29.55 percent in the age group of 50 years and above. Similarly, in Phek, 13.64 percent services entrepreneurs are in the age group of 20-30

years, 25.00 percent units in the age group of 30-40 years, 36.36 percent in the age group of 40-50 years and 25.00 percent in the age group of 50 years and above.

VIII: Training

Training programme empowers entrepreneurs and employees to strengthen their skills and knowledge which in the long run helps them to perform better. It encourages them to be more confident in dealing with business task and give better understanding of business situations and thereby able to grow stronger. Training also motivates entrepreneurs for business development and creates innovative ideas.

Table II.30: Category-wise number of entrepreneurs trained

Sector	Category	Training		
		Yes	No	**Total**
Manufacturing	Micro enterprise	3 (4.55)	63 (95.45)	66
	Small enterprise	-	18 (100.00)	18
	Medium enterprise	-	1 (100.00)	1
	Total	**3 (3.53)**	**82 (96.47)**	**85**
Services	Micro enterprise	7 (4.32)	155 (95.68)	162
	Small enterprise	9 (14.75)	52 (85.25)	61
	Medium enterprise	4 (40.00)	6 (60.00)	10
	Total	**20 (8.58)**	**213 (91.42)**	**233**
Grand total		**23 (7.23)**	**295 (92.77)**	**318**

Source: field survey
* Figure in parenthesis indicates percentage

MSMEs has reflected very poorly in terms of trained entrepreneurship and trained employees which shows that only 7.23 percent of the entrepreneurs have undergone training and the bulk of enterprise which is 92.77 percent are without having any prior training. In manufacturing sector, only 3.53 percent are trained and 96.47

percent are untrained, and in services sector, 8.58 percent are trained and 91.42 percent are untrained which is comparatively higher than manufacturing sector.

Table II.31: Activity-wise number of entrepreneurs trained

Sector	Resource-based enterprise	Training		
		Yes	No	**Total**
Manufacturing	Forest-based enterprise	2 (8.00)	23 (92.00)	**25**
	Mineral-based enterprise	1 (3.03)	32 (96.97)	**33**
	Agro-based enterprise	-	27 (100.00)	**27**
	Total	**3 (3.53)**	**82 (96.47)**	**85**
Services	Shops	14 (8.59)	149 (91.41)	**163**
	Transport	2 (6.67)	28 (93.33)	**30**
	Workshops	2 (7.69)	24 (92.31)	**26**
	Hotels	2 (14.29)	12 (85.71)	**14**
	Total	**20 (8.58)**	**213 (91.42)**	**233**
Grand total		**23 (7.23)**	**295 (92.77)**	**318**

* Figure in parenthesis indicates percentage

On the basis of resource-based enterprises under the manufacturing sector, trained entrepreneur is 8 percent in forest-based activity, 3.03 percent in mineral-based enterprise and in agro-based all the entrepreneurs are untrained. On the basis of activity-wise in services sector, trained entrepreneur is 8.59 percent in shops, 6.67 percent in transport, 7.69 percent in workshops and 14.29 percent in hotels.

The town-wise classification in manufacturing sector as represented in table II.32 shows that in Dimapur, 2.56 percent of the enterprises are run by trained entrepreneurs whereas 97.44 percent of the enterprises are run by untrained entrepreneurs; in Kohima all enterprises are run by untrained entrepreneurs; and in Phek 15.38 percent of the enterprises are run by trained entrepreneurs whereas 84.62 percent of the enterprises are run by untrained entrepreneurs. The classification in services sector shows that in Dimapur, 11.88 percent of the entrepreneurs are trained while 88.12 percent are untrained; in Kohima, 6.82 percent of the entrepreneurs are trained while

93.18 percent are untrained; and in Phek, 4.55 percent of the entrepreneurs are trained and 95.45 percent are untrained.

Table II.32: Town-wise number of entrepreneurs trained

Sector	Town	Training		
		Yes	No	Total
Manufacturing	Dimapur	1 (2.56)	38 (97.44)	39
	Kohima	-	33 (100.00)	33
	Phek	2 (15.38)	11 (84.62)	13
	Total	3 (3.53)	82 (96.47)	85
Services	Dimapur	12 (11.88)	89 (88.12)	101
	Kohima	6 (6.82)	82 (93.18)	88
	Phek	2 (4.55)	42 (95.45)	44
	Total	20 (8.58)	213 (91.42)	233
Grand total		23 (7.23)	295 (92.77)	318

Source: field survey
* Figure in parenthesis indicates percentage

IX: Sources of income apart from MSMEs

An entrepreneur is a risk taker and making decision is a probable source which can be a threat or opportunity or both in assuring success of the business. Business risks occurs from uncertainty about the future and effect of current judgements, therefore business choices need to consist of an assessment of their outcomes and the possibility that the outcome may differ from expectations. Therefore, it is becoming a necessity in an environment where economic fluctuations are uncertain to have more than one sources of income.

Table II.33: Entrepreneurs having other source of income (Category-wise)

Sector	Category	Other source of income		
		Yes	No	**Total**
Manufacturing	Micro enterprise	15 (22.73)	51 (77.27)	**66**
	Small enterprise	6 (33.33)	12 (66.67)	**18**
	Medium enterprise	1 (100.00)	-	**1**
	Total	**22 (25.88)**	**63 (74.12)**	**85**
Services	Micro enterprise	17 (10.69)	142 (89.31)	**159**
	Small enterprise	16 (25.00)	48 (75.00)	**64**
	Medium enterprise	3 (30.00)	7 (70.00)	**10**
	Total	**36 (15.45)**	**197 (84.55)**	**233**
Grand total		**58 (18.24)**	**260 (81.76)**	**318**

Source: field survey
* Figure in parenthesis indicates percentage

On the basis of resource-based enterprises under manufacturing sector, 4 percent of the entrepreneurs have other source of income in forest-based activity, 24.24 percent in mineral-based activity and 48.15 percent in agro-based activity. Similarly, on the basis of activity-wise in services sector, 11.66 percent of the entrepreneurs have other source of income, 30 percent in transport, 15.38 percent in workshops and 28.57 percent in hotels.

Table II.34: Entrepreneurs having other source of income (Activity-wise)

Sector	Resource based/ activity	Other source of income		
		Yes	No	**Total**
Manufacturing	Forest based	1 (4.00)	24 (96.00)	**25**
	Mineral based	8 (24.24)	25 (75.76)	**33**
	Agro based	13 (48.15)	14 (51.85)	**27**
	Total	**22 (25.88)**	**63 (74.12)**	**85**
Services	Shops	19 (11.66)	144 (88.34)	**163**
	Transport	9 (30.00)	21 (70.00)	**30**
	Workshops	4 (15.38)	22 (84.62)	**26**
	Hotels	4 (28.57)	10 (71.43)	**14**
	Total	**36 (15.45)**	**197 (84.55)**	**233**
Grand total		**58 (18.24)**	**260 (81.76)**	**318**

Source: field survey
* Figure in parenthesis indicates percentage

Table II.35: Entrepreneurs having other source of income (Town-wise)

Sector	Town	Other source of income		
		Yes	No	**Total**
Manufacturing	Dimapur	11 (28.21)	28 (71.79)	**39**
	Kohima	10 (30.30)	23 (69.70)	**33**
	Phek	2 (15.38)	11 (84.62)	**13**
	Total	**22 (25.88)**	**63 (74.12)**	**85**
Services	Dimapur	16 (15.84)	85 (84.16)	**101**
	Kohima	16 (18.18)	72 (81.82)	**88**
	Phek	4 (9.09)	40 (90.91)	**44**
	Total	**36 (15.45)**	**197 (84.55)**	**233**
Grand total		**58 (18.24)**	**260 (81.76)**	**318**

Source: field survey
* Figure in parenthesis indicates percentage

In manufacturing sector (table II.35), town-wise classification shows 28.21 percent, 30.30 percent and 15.38 percent of enterprises have more than one sources of income in Dimapur, Kohima and Phek respectively while 71.79 percent, 69.70 percent and 84.62 percent of enterprises are having only one source of income in Dimapur, Kohima and Phek respectively. Similarly, in services sector, 16.84 percent, 18.18 percent and 9.09 percent of enterprises have more than one sources of income in Dimapur, Kohima and Phek respectively while 84.16 percent, 81.82 percent and 90.91 percent of enterprises are having only one source of income in Dimapur, Kohima and Phek respectively.

CHAPTER III

ECONOMIC ANALYSIS OF MSMEs

This chapter analyses the various economic aspects of the enterprises like sources of finance, establishment cost and operating costs. An attempt is made to analyse the regression effects of various items of expenditure on income and also analyse the production function. Cobb-Douglas production function is used to evaluate the elasticity of factors of production with respect to labour and capital; to estimate the output and degree of returns to scale both in the manufacturing sector and services sector.

I: Manufacturing sector

I.1: Investment

An investment is an asset or item that is purchased with the hope that it will generate income or will appreciate in the future. It is also referred to a purchase of goods that are not consumed today but are used in the future to create wealth. It is also defined as a monetary asset purchased with the idea that the asset will provide income in the future. An initial investment is the money an entrepreneur needs to start a firm or business and may include the entrepreneur's own money, money borrowed from a variety of sources, including governmental subsidised scheme, banks, family and friends or money raised from the investors.

Table III.1: Initial sources of finance

Category	Personal	Money-lender	Govt./ banks	Family/ friends	Total
Micro enterprise	46 (69.69)	5 (7.58)	10 (15.15)	5 (7.58)	66
Small enterprise	13 (72.22)	-	5 (27.78)	-	18
Medium enterprise	1 (100)	-	-	-	1
Total	**60 (70.59)**	**5 (5.88)**	**15 (17.65)**	**5 (5.88)**	**85**

Source: Field survey
* Figure in parenthesis indicates percentage

Sources of initial finance shows that 70.59 percent of the businesses started with personal or own money, 5.88 percent of the enterprise borrowed from private money lender, 17.65 percent of the enterprise financed by government and banking institutions and 5.88 percent of the enterprise borrowed from family and friends. Category-wise shows that in micro enterprise sources of initial finance 69.69 percent (personal), 7.58 percent (money lender), 15.15 percent (government/ banks) and 7.58 percent (family/friends). Under small enterprise, 72.22 percent of the units started with their own money and the remaining 27.78 percent financed by government and banks.

Table III.2: Resource-based initial sources of finance

Resource-based enterprise	Personal	Money lender	Govt./ banks	Family/ friends	Total
Forest-based enterprise	21 (84.00)	1 (4.00)	2 (8.00)	1 (4.00)	25
Mineral-based enterprise	20 (60.61)	4 (12.12)	8 (24.24)	1 (3.03)	33
Agro-based enterprise	19 (70.37)	-	5 (18.52)	3 (11.11)	27
Total	**60 (70.59)**	**5 (5.88)**	**15 (17.65)**	**5 (5.88)**	**85**

Source: Field survey
* Figure in parenthesis indicates percentage

As shown in table III.2, 84 percent of initial investments in forest-based enterprises are personal money, 8 percent are financed by government and banks and 4 percent each are borrowed from private money lender, and family and friends for starting their businesses. In mineral-based enterprise, 60.61 percent started with

personal money, 24.24 percent are financed by government and banks, 12.12 percent borrowed from private money lender, and 3.03 percent borrowed from family and friends for their initial investment. Sources of initial finance in agro-based enterprise shows that 70.37 percent of the enterprises have started with personal money, 18.52 percent are financed by government and banks and 11.11 percent with the help from family and friends.

Table III.3: Category-wise and town-wise distribution of investment (in Rs. Lakhs)

Category	Investment	Avg. Investment	No. of Units
Dimapur			
Micro enterprise	180.2 (19.80)	6.44	28 (71.79)
Small enterprise	730 (80.20)	66.36	11 (28.21)
Total	**910.2(38.76)**	**23.34**	**39 (45.88)**
Kohima			
Micro enterprise	138 (10.47)	5.11	27 (81.82)
Small enterprise	430 (32.63)	86	5 (15.15)
Medium enterprise	750 (56.90)	750	1 (3.03)
Total	**1318 (56.13)**	**39.94**	**33 (38.82)**
Phek			
Micro enterprise	34.85(29.08)	3.17	11 (84.62)
Small enterprise	85 (70.92)	42.5	2 (15.38)
Total	**119.85 (5.11)**	**9.22**	**13 (15.30)**
Overall			
Micro enterprise	353.05 (15.34)	5.35	66 (77.65)
Small enterprise	1245 (53.02)	69.17	18 (21.18)
Medium enterprise	750 (31.94)	750	1 (1.18)
Grand Total	**2348.05**	**27.62**	**85**

Source: Field survey
* Figure in parenthesis indicates percentage

The total investment made in 85 manufacturing units is Rs 2348.05 lakhs with an average of Rs 27.62 lakhs per unit. The distribution of investment shows that micro enterprises account for 15.34 percent, small enterprises 53.02 percent and medium enterprises 31.94 percent. Out of the total investment of Rs.2348.05 lakhs, 38.76 percent

of the investment is in Dimapur, 56.13 percent of the investment is in Kohima and 5.11 percent of the investment is in Phek. Category-wise enterprises show that in Dimapur, 19.80 percent of the investment is in micro enterprises and 80.20 percent of the investment is in small enterprises. In Kohima, 10.47 percent of the investment is in micro enterprises, 32.63 percent of the investment is in small enterprises and 56.90 percent of the investment is in medium enterprises. In Phek, 29.08 percent of the investment is in micro enterprises and 70.92 percent of the investment is in small enterprises. The average investment is highest in small enterprises in Dimapur, the average highest investment in medium enterprises is in Kohima and the average highest investment in small enterprises is in Phek. Among the towns, average investment is highest in Kohima at Rs.39.94 lakhs per unit followed by Dimapur and Phek.

The enterprises under forest-based include furniture, saw-mill and handicrafts. The activities under mineral-based include mineral water, fabrication and steel works, bricks, quarry and quarry products, tyre crafts and cement crafts. The activities under agro-based include poultry, piggery, plantation, plant nursery, production of food products and floriculture.

The distribution of investment according to resource-based enterprises shows that forest-based enterprise accounts for 12.99 percent, mineral-based enterprise 45.99 percent and agro-based enterprise 41.02 percent. Town-wise comparison shows that in forest-based enterprise, Dimapur has a higher percentage of total investment but the average investment is slightly higher in Kohima with Rs.14.21 lakhs per unit. In mineral-based enterprise, Dimapur has a higher percentage of total investment but the average investment is higher in Phek with Rs.42.50 lakhs per unit. In agro-based enterprise, Kohima's percentage investment as well as average investment is higher than

Dimapur and Phek. In Dimapur and Phek, highest investment is incurred on mineral-based enterprise while in Kohima, highest investment is on agro-based enterprise.

Table III.4: Resource-based and town-wise distribution of investment (in Rs. Lakhs)

Dimapur			
Resource-based enterprise	Investment	Avg. Investment	No. of Units
Forest-based enterprise	183.25 (20.13)	14.09	13 (33.33)
Mineral-based enterprise	544.95 (59.87)	32.06	17 (43.59)
Agro-based enterprise	182 (20.00)	20.22	9 (23.08)
Total	**910.2 (38.76)**	**23.34**	**39 (45.88)**
Kohima			
Forest-based enterprise	99.5 (7.55)	14.21	7 (21.21)
Mineral-based enterprise	450 (34.14)	32.14	14 (42.42)
Agro-based enterprise	768.5 (58.31)	64.04	12 (36.37)
Total	**1318 (56.13)**	**39.94**	**33 (38.82)**
Phek			
Forest-based enterprise	22.25 (18.57)	4.45	5 (38.46)
Mineral-based enterprise	85 (70.92)	42.50	2 (15.39)
Agro-based enterprise	12.6 (10.51)	2.10	6 (46.15)
Total	**119.85 (5.11)**	**9.22**	**13 (15.30)**
Overall			
Forest-based enterprise	305 (12.99)	32.76	25 (29.41)
Mineral-based enterprise	1079.95(45.99)	106.7	33 (38.82)
Agro-based enterprise	963.1 (41.02)	86.36	27 (31.77)
Total	**2348.05**	**27.62**	**85**

Source: same as table III.1

I.2: Items of Expenditure

Expenditure are funds used by an enterprise to attain new assets and improve existing ones. In other words, expenditure is payments for necessary inputs in the operations of the business. Expenditure is classified as wages, rent, electricity, raw materials, transportation and miscellaneous.

Table III.5: Items of monthly expenditure

Items of expenditure	Amount (in Rs.)	Percentage to total expenditure
Wages	34,22,786	16.64
Rent	3,40,641	1.66
Electricity	15,24,750	7.41
Raw materials	1,13,37,500	55.13
Transportation	23,44,000	11.40
Miscellaneous	15,95,900	7.76
Total	**2,05,65,577**	**100.00**

Source: same as table III.1

The total monthly expenditure in manufacturing sector is Rs. 2,05,65,577 of which wages is Rs. 34,22,786 (16.64 percent), rent is Rs. 3,40,641 (1.66 percent), electricity is Rs. 15,24,750 (7.41 percent), raw materials is Rs. 1,13,37,500 (55.13 percent), transportation is Rs. 23,44,000 (11.40 percent) and miscellaneous is Rs. 15,95,900 (7.76 percent). Among the items of expenditure, raw material is the single largest item of expenditure followed by wages and transportation.

I.3: Wages

Wages will mean all payments to persons engaged by the enterprise whether directly or indirectly with the entrepreneurial activity and thus include all administrative, technical and clerical staff. It also includes all working proprietors without any pay who work for the enterprise in any direct and productive capacity and also self employed individual who is actively participating in the production and services.

Table III.6: Category-wise expenditure on wages (in Rs.)

Category	Units	Employment	Wages	Avg. wages	Percentage to total expenditure
Dimapur					
Micro enterprise	28 (71.79)	55 (16.32)	373073 (19.22)	6783.15	9.85
Small enterprise	11 (28.21)	282 (83.68)	1568000 (80.78)	5560.28	21.68
Total	**39 (45.88)**	**337 (65.95)**	**1941073 (56.71)**	**5759.86**	**31.54**
Kohima					
Micro enterprise	27 (81.82)	76 (60.80)	477750 (42.67)	6286.18	14.49
Small enterprise	5 (15.15)	45 (36.00)	626000 (55.90)	13911.11	21.48
Medium enterprise	1 (3.03)	4 (3.20)	16000 (1.43)	4000	26.23
Total	**33 (38.82)**	**125 (24.46)**	**1119750 (32.71)**	**8958**	**17.85**
Phek					
Micro enterprise	11 (84.62)	27 (55.10)	176963 (48.89)	6554.19	20.12
Small enterprise	2 (15.38)	22 (44.90)	185000 (51.11)	8409.09	7.38
Total	**13 (15.30)**	**49 (9.59)**	**361963 (10.58)**	**7387**	**10.69**
Overall					
Micro enterprise	66 (77.64)	158 (30.92)	1027786 (30.03)	6504.975	4.97
Small enterprise	18 (21.18)	349 (68.30)	2379000 (69.50)	6816.619	11.51
Medium enterprise	1 (1.18)	4 (0.78)	16000 (0.47)	4000	0.08
Total	**85**	**511**	**3422786**	**6698.21**	**16.55**

Source: same as table III.1

Out of the total expenditure on wages which is Rs.34,22,786 in the manufacturing sector (table III.6), Dimapur accounts for 56.71 percent with an average wage of Rs.5760, Kohima 32.71 percent with an average wage of Rs.8958 and Phek 10.58 percent with an average wage of Rs.7387.

Category-wise, in Dimapur, wages in micro enterprises account for 19.22 percent with an average wage of Rs.6783 per employment and small enterprises 80.78 percent with an average wage of Rs 5560 per employment. Out of the total expenditure

of Rs.37,86,402 under micro enterprises, wages account for 9.85 percent and in small enterprises' total expenditure of Rs.72,30,813, wages is 21.68 percent.

In Kohima, wages in micro enterprises account for 42.67 percent with an average wage of Rs.6286 per employment, small enterprises 55.90 percent with an average wage of Rs.13,911 per employment and medium enterprises 1.43 percent with an average wage of Rs.4000 per employment. Out of the total expenditure of Rs.32,96,385 under micro enterprises, wages constitute 14.49 percent; under small enterprises, total expenditure is Rs.29,14,476 of which wages account for 21.48 percent and in medium enterprises' total expenditure of Rs.61,000, wages form 26.23 percent.

In Phek, wages in micro enterprises account for 48.89 percent with an average wage of Rs.6554 per employment and small enterprises 51.11 percent with an average wage of Rs 8409 per employment. Out of the total expenditure in micro enterprises which is Rs.8,79,501, wages constitute 20.12 percent and in small enterprise's total expenditure of Rs.25,07,000, wages is 10.69 percent.

Table III.7 shows the resource-based expenditure on wages where forest-based enterprises account for 19.50 percent, mineral-based enterprises 71.35 percent and agro-based enterprises 9.15 percent.

As per resourced-based, in Dimapur, wages in forest-based enterprises account for 13.88 percent with an average wage of Rs.6718.81 per employment, mineral-based enterprises 77.59 percent with an average wage of Rs.5476.96 per employment and agro-based enterprises 7.52 percent with an average wage of Rs. 7684.21 per employment. In Kohima, wages in forest-based enterprises account for 26.84 percent with an average wage of Rs.7329.27 per employment, mineral-based enterprises 67.07

percent with an average wage of Rs.10884.06 per employment and agro-based enterprises 6.09 percent with an average wage of Rs. 4550 per employment. Similarly, in Phek, wages in forest-based enterprises account for 22.25 percent with an average wage of Rs.7800 per employment, mineral-based enterprises 51.11 percent with an average wage of Rs.8409.09 per employment and agro-based enterprises 27.34 percent with an average wage of Rs. 5821.35 per employment.

Table III.7: Resource-based expenditure on wages (in Rs.)

Resource-based enterprise	Units	Employment	Wage	Avg. wage	Percentage to total expenditure
Dimapur					
Forest-based enterprise	13 (33.33)	43 (12.76)	288909 (13.88)	6718.81	11.12
Mineral-based enterprise	17 (43.59)	275 (81.60)	1506164 (77.59)	5476.96	20.54
Agro-based enterprise	9 (23.08)	19 (5.64)	146000 (7.52)	7684.21	13.26
Total	**39 (45.88)**	**337 (65.95)**	**1941073 (56.71)**	**5759.86**	**31.54**
Kohima					
Forest-based enterprise	7 (21.21)	41 (32.80)	300500 (26.84)	7329.27	20.36
Mineral-based enterprise	14 (42.42)	69 (55.20)	751000 (67.07)	10884.06	17.47
Agro-based enterprise	12 (36.37)	15(12.00)	68250 (6.09)	4550	13.70
Total	**33 (38.82)**	**125 (24.46)**	**1119750 (32.71)**	**8958**	**17.85**
Phek					
Forest-based enterprise	5 (38.46)	10 (20.41)	78000 (22.55)	7800	26.17
Mineral-based enterprise	2 (15.39)	22 (44.90)	185000 (51.11)	8409.09	7.38
Agro-based enterprise	6 (46.15)	17 (34.69)	98963 (27.34)	5821.35	21.50
Total	**13 (15.30)**	**49 (9.59)**	**361963 (10.58)**	**7387**	**10.69**
Overall					
Forest-based enterprise	25 (29.41)	94 (18.40)	667409 (19.50)	7100.10	14.90
Mineral-based enterprise	33 (38.82)	366 (71.62)	2442164 (71.35)	6672.58	17.28
Agro-based enterprise	27 (31.77)	51 (9.98)	313213 (9.15)	6141.43	18.99
Total	**85**	**511**	**3422786**	**6698.21**	**16.55**

Source: same as table III.1

Town-wise comparison shows that in forest-based enterprise, the percentage of total expenditure on wages is higher in Kohima but average wage per worker is higher

in Phek. In mineral-based enterprise, the percentage of total expenditure on wages is higher in Dimapur but average wage per worker is higher in Kohima. In agro-based enterprise, the percentage expenditure on wages is higher in Phek but the average wage per worker is higher in Dimapur. The percentage expenditure of wages to total expenditure on wages is higher in Dimapur which is 31.54 percent indicating a higher level of employment as compared to Kohima and Phek.

I.4: Rent

Rent is another important form of reward to factors of production such as land, building, apartment, office, or other property which is essential for a business entity to execute their day-to-day works. Rent is an unavoidable part of the expenditure incurred by the entrepreneur.

Out of the total expenditure on rent which is Rs. 3,40,641, Dimapur accounts for 72.63 percent with an average rent of Rs.6343.38 per unit, Kohima 21.11 percent with an average rent of Rs.2179.12 per unit and Phek 6.26 percent with an average rent of Rs.1641.38. In Dimapur, rent in micro enterprises account for 58.04 percent with an average rent of Rs.5127.82 per unit and small enterprises 41.96 percent with an average rent of Rs 9437.55 per unit. In Kohima, expenditure on rent in micro enterprises account for 61.38 percent with an average rent of Rs.1634.63 per unit, small enterprises 31.67 percent with an average rent of Rs.4555.20 per unit and medium enterprises 6.95 percent with an average rent of Rs.5000 per unit. In Phek, expenditure on rent in micro enterprises account for 67.19 percent with an average rent of Rs.1303.45 per unit and small enterprises 32.81 percent with an average rent of Rs.3500 per unit.

Table III.8: Category wise expenditure on rent (in Rs.)

Category	Units	Rent	Avg. rent	Percentage to total expenditure
Dimapur				
Micro enterprise	28 (71.79)	143579 (58.04)	5127.82	3.79
Small enterprise	11 (28.21)	103813 (41.96)	9437.55	1.44
Total	**39 (45.88)**	**247392 (72.63)**	**6343.38**	**2.25**
Kohima				
Micro enterprise	27 (81.82)	44135 (61.38)	1634.63	1.34
Small enterprise	5 (15.15)	22776 (31.67)	4555.20	0.78
Medium enterprise	1 (3.03)	5000 (6.95)	5000.00	8.20
Total	**33 (38.82)**	**71911 (21.11)**	**2179.12**	**1.15**
Phek				
Micro enterprise	11 (84.62)	14338 (67.19)	1303.45	1.63
Small enterprise	2 (15.38)	7000 (32.81)	3500.00	0.28
Total	**13 (15.30)**	**21338 (6.26)**	**1641.38**	**0.63**
Overall				
Micro enterprise	66 (77.64)	202052 (59.31)	3061.39	2.54
Small enterprise	18 (21.18)	133589 (39.22)	19084.14	1.06
Medium enterprise	1 (1.18)	5000 (11.47)	5000.00	8.20
Total	**85**	**340641**	**4007.54**	**1.65**

Source: same as table III.1

Table III.9 represents resource-based expenditure on rent where forest-based enterprises account for 36.62 percent, mineral-based enterprises 53 percent and agro-based enterprise 10.38 percent.

Town-wise comparison shows that in forest-based enterprise, Dimapur has higher a percentage of total expenditure on rent and average rent per unit. In mineral-based enterprise, Kohima has a higher percentage of total expenditure on rent but average rent per unit is higher in Dimapur. In agro-based enterprise, percentage expenditure on rent is higher in Kohima but the average rent per unit is higher in Dimapur. The percentage expenditure of rent to total expenditure on rent is higher in Dimapur which is 2.25 percent indicating rent is more expensive and might be due to a

higher concentration of business activities as compared to Kohima and Phek. Among the resource based activities, the highest rent of Rs.3500 is paid in mineral-based enterprises and is followed by forest-based enterprises with Rs.2000. Among the towns, the average rent in Dimapur is higher at Rs.6343 and is higher than the overall average rent of Rs.4008.

Table III.9: Resource-based expenditure on rent (in Rs.)

Resource-based enterprise	Units	Rent	Avg. rent	Percentage to total expenditure
Dimapur				
Forest-based enterprise	13 (33.33)	101600 (41.07)	7815.38	3.93
Mineral-based enterprise	17 (43.59)	128000 (51.74)	7529.41	1.75
Agro-based enterprise	9 (23.08)	17792 (7.19)	1976.89	1.62
Total	**39 (45.88)**	**247392 (72.63)**	**6343.38**	**2.25**
Kohima				
Forest-based enterprise	7 (21.21)	18000 (25.03)	2571.43	1.22
Mineral-based enterprise	14 (42.42)	45552 (63.35)	3253.71	1.06
Agro-based enterprise	12 (36.37)	8359 (11.62)	696.58	1.68
Total	**33 (38.82)**	**71911 (21.11)**	**2179.12**	**1.15**
Phek				
Forest-based enterprise	5 (38.46)	5146 (24.11)	1029.20	1.23
Mineral-based enterprise	2 (15.39)	7000 (32.81)	3500.00	0.28
Agro-based enterprise	6 (46.15)	9192 (43.08)	1532.00	2.00
Total	**13 (15.30)**	**21338 (6.26)**	**1641.38**	**0.63**
Overall				
Forest based enterprise	25 (29.41)	124746 (36.62)	4989.84	2.78
Mineral based enterprise	33 (38.82)	180552 (53.00)	5471.27	1.28
Agro based enterprise	27 (31.77)	35343 (10.38)	1309.00	1.72
Total	**85**	**340641**	**4007.54**	**1.65**

Source: same as table III.1

I.5: Electricity

Out of the total expenditure on electricity which is Rs.15,24,750 in manufacturing sector, Dimapur accounts for 92.80 percent with an average electricity

expenditure of Rs.36,283 per unit, Kohima 5.71 percent with an average electricity expenditure of Rs.2636 per unit and Phek 1.49 percent with an average electricity expenditure of Rs.1746. In Dimapur, expenditure on electricity in micro enterprises is 2 percent with an average electricity expenditure of Rs.1109 per unit and small enterprises is 98 percent with an average electricity expenditure of Rs.1,25,818 per unit. In micro enterprises, expenditure on electricity is 1 percent of total expenditure and in small enterprises, expenditure on electricity account for 19 percent.

Table III.10: Category-wise expenditure on electricity (in Rs.)

Category	Units	Electricity	Avg. Electricity	Percentage to total expenditure
Dimapur				
Micro enterprise	28 (71.79)	31050 (2.19)	1108.929	0.82
Small enterprise	11 (28.21)	1384000 (97.81)	125818.2	19.14
Total	**39 (45.88)**	**1415050 (92.80**)	36283.33	12.84
Kohima				
Micro enterprise	27 (81.82)	43800 (50.34)	1622.22	1.33
Small enterprise	5 (15.15)	43200 (49.66)	8640.00	1.48
Medium enterprise	1 (3.03)	-	-	-
Total	**33 (38.82)**	**87000 (5.71**)	2636.36	1.39
Phek				
Micro enterprise	11 (84.62)	12700 (55.95)	1154.55	1.44
Small enterprise	2 (15.38)	10000 (44.05)	5000.00	0.40
Total	**13 (15.30)**	**22700 (1.49**)	1746.15	0.67
Overall				
Micro enterprise	66 (77.64)	87550 (5.74)	1326.52	1.10
Small enterprise	18 (21.18)	1437200 (94.26)	205314.29	11.36
Medium enterprise	1 (1.18)	**-**	-	-
Total	**85**	**1524750**	17938.24	7.37

Source: same as table III.1

In Kohima, expenditure on rent in micro enterprises and small enterprises is 50 percent each with average electricity expenditure of Rs.1622 per unit and Rs.8640 per unit respectively. In micro enterprises, expenditure on electricity is 1.33 percent of total

expenditure and in small enterprises, electricity expenditure is 1.48 percent. In Phek, expenditure on electricity in micro enterprises is 56 percent with an average electricity expenditure of Rs.1155 per unit and small enterprises is 44 percent with average electricity expenditure of Rs.5000 per unit. In micro enterprises, electricity expenditure accounts for 1.44 percent of total expenditure and in small enterprises, electricity expenditure form 0.40 percent.

Table III.11: Resource-based expenditure on electricity (in Rs.)

Resource-based enterprise	Units	Electricity	Avg. Electricity	Percentage to total expenditure
Dimapur				
Forest-based enterprise	13 (33.33)	72350 (5.11)	5565.39	3.32
Mineral-based enterprise	17 (43.59)	1339700 (94.68)	78805.88	18.27
Agro-based enterprise	9 (23.08)	3000 (0.21)	333.33	0.27
Total	**39 (45.88)**	**1415050 (92.80)**	**36283.33**	**12.84**
Kohima				
Forest-based enterprise	7 (21.21)	23600 (27.13)	3371.00	1.60
Mineral-based enterprise	14 (42.42)	59500 (68.39)	4250.00	1.39
Agro-based enterprise	12 (36.37)	3900 (5.42)	325.00	0.78
Total	**33 (38.82)**	**87000 (5.71)**	**2636.36**	**1.39**
Phek				
Forest-based enterprise	5 (38.46)	8500 (37.45)	1700	2.03
Mineral-based enterprise	2 (15.39)	10000 (44.05)	5000	0.40
Agro-based enterprise	6 (46.15)	4200 (18.50)	700	0.91
Total	**13 (15.30)**	**22700 (1.49)**	**1746.15**	**0.67**
Overall				
Forest-based enterprise	25 (29.41)	104450 (6.85)	4178	2.33
Mineral-based enterprise	33 (38.82)	1409200 (92.42)	42709.09	9.97
Agro-based enterprise	27 (31.77)	11100 (0.73)	411.11	0.54
Total	**85**	**1524750**	**9713.06**	**7.38**

Source: same as table III.1

Table III.11 represents resource-based expenditure on electricity where forest-based, mineral-based and agro-based enterprises account for 6.85 percent, 92.42 percent and 0.73 percent respectively. Town-wise comparison shows that in forest-based

enterprise, the percentage of total expenditure on electricity is higher in Phek and average electricity consumption per unit is higher in Dimapur. In mineral-based enterprise, the percentage of total expenditure on electricity and average electricity consumption per unit is higher in Dimapur. In agro-based enterprise, the percentage expenditure on electricity and the average electricity consumption is higher in Phek. The percentage expenditure of electricity to total expenditure on electricity is higher in Dimapur as compared to Kohima and Phek.

I.6: Raw materials

Raw material is an important input in the production process and a proper source is vital for the enterprise to grow. Raw material is defined as crude or processed material that can be converted by manufacture, processing, or combination into a new and useful product. Some of the raw materials considered in the study are iron, timber, log, stone, wools, wheat flour, earth, cement, brick sand, bamboo, rubber, cow dung, manual sand, seeds, plastics, etc.

Table III.12: Category-wise sources of raw materials

Category	Within district	Within & outside District	Within & outside District & outside state	Total
Micro enterprise	45 (68.18)	14 (21.21)	7 (10.61)	66
Small enterprise	13 (72.22)	-	5 (27.78)	18
Medium enterprise	-	-	1 (100)	1
Total	58 (68.24)	14 (16.47)	13 (15.29)	85

Source: same as table III.1

In category-wise, 58 (68.24 percent) enterprises are getting the raw materials from within the district, 14 (16.47 percent) enterprises are getting raw materials from within and outside the district and 13 (15.29 percent) enterprises are getting raw

materials from within and outside the district as well as outside the state. In micro and small enterprises, 68.18 percent and 72.22 percent of the enterprises respectively are getting raw materials from within the district and 10.61 percent and 27.78 percent of the enterprises in micro and small enterprises respectively are getting raw materials from within and outside the district and also outside the state.

Table III.13: Resource-based sources of raw materials

Resource-based enterprise	Within district	Within & outside District	Within & outside District & outside state	Total
Forest-based enterprise	17 (68.00)	2 (8.00)	6 (24.00)	25
Mineral-based enterprise	21 (63.64)	7 (21.21)	5 (15.15)	33
Agro-based enterprise	20 (74.07)	5 (18.52)	2 (7.41)	27
Total	58 (68.24)	14 (16.47)	13 (15.29)	85

Source: same as table III.1

Similarly, in forest-based enterprise, 68 percent of the enterprises are getting raw materials from within the district, 8 percent of the enterprises are getting raw material from within and outside the district and 24 percent of the enterprise gets raw materials from within and outside the district and also from outside the state. In mineral-based enterprises, 63.64 percent of the enterprises are getting raw materials from within the district, 21.21 percent of the enterprises are getting raw material from within and outside the district and 15.15 percent of the enterprise gets raw materials from within and outside the district and also from outside the state. Likewise in agro-based enterprises, 74.07 percent of the enterprises are getting raw materials from within the district, 18.52 percent of the enterprises are getting raw material from within and outside the district and 7.41 percent of the enterprise gets raw materials from within and outside the district and also from outside the state.

Table III.14: Category-wise expenditure on raw materials (in Rs.)

Category	Units	Raw materials	Avg. Raw materials	Percentage to total expenditure
Dimapur				
Micro enterprise	28 (71.79)	2775000 (44.65)	99107.14	73.29
Small enterprise	11 (28.21)	3440000 (55.35)	312727.3	47.57
Total	**39 (45.88)**	**6215000 (54.48)**	**159359**	**56.41**
Kohima				
Micro enterprise	27 (81.82)	2197000 (64.30)	81370.37	66.65
Small enterprise	5 (15.15)	1200000 (35.12)	240000	41.17
Medium enterprise	1 (3.03)	20000 (0.58)	20000	32.79
Total	**33 (38.82)**	**3417000 (29.95)**	**103545.5**	**54.48**
Phek				
Micro enterprise	11 (84.62)	575500 (32.41)	52318.18	65.43
Small enterprise	2 (15.38)	1200000 (67.59)	600000	47.87
Total	**13 (15.30)**	**1775500 (15.57)**	**136576.9**	**52.43**
Overall				
Micro enterprise	66 (77.64)	5547500 (48.63)	84053.03	69.67
Small enterprise	18 (21.18)	5840000 (51.19)	324444.44	46.16
Medium enterprise	1 (1.18)	20000 (0.18)	20000	32.79
Total	**85**	**11407500**	**134205.9**	55.17

Source: same as table III.1

Out of the total expenditure on raw materials which is Rs.1,14,07,500 in manufacturing sector, Dimapur accounts for 54.48 percent with an average raw materials expenditure of Rs.1,59,359 per unit, Kohima 29.95 percent with an average raw materials expenditure of Rs.1,03,545.50 per unit and Phek 15.57 percent with an average raw materials expenditure of Rs.1,36,576.90 per unit. In Dimapur, raw materials expenditure in micro enterprises is 44.65 percent with an average raw materials expenditure of Rs.99,107.14 per unit and small enterprises is 55.35 percent with an average raw materials expenditure of Rs.3,12,727.30 per unit. Expenditure on raw materials account for 73.29 percent of the total expenditure of micro enterprises and raw materials expenditure constitute 47.57 percent of the total expenditure of small enterprises. In Kohima, expenditure on raw materials in micro enterprises is 64.30

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percent with an average raw materials expenditure of Rs.81,370.37 per unit, small enterprises is 35.12 percent with an average raw materials expenditure of Rs.2,40,000 per unit and medium enterprises is 0.58 percent with an average raw materials expenditure of Rs.20,000 per unit. Expenditure on raw materials account for 66.65 percent of the total expenditure of micro enterprises, 41.17 percent of the total expenditure of small enterprises and 32.79 percent of the total expenditure of medium enterprises. In Phek, expenditure on raw materials in micro enterprises cover 32.41 percent with an average raw materials expenditure of Rs.52,318 per unit and small enterprises 67.59 percent with an average raw materials expenditure of Rs.6,00,000 per unit. Expenditure on raw materials in micro enterprises account for 65.43 percent of the total expenditure of micro enterprises and 47.87 percent of the total expenditure of small enterprises.

Table III.15 represents resource-based expenditure on raw materials where forest-based enterprise accounts for 26.21 percent, mineral-based enterprise 62.99 percent and agro-based enterprise 10.80 percent. Town-wise comparison shows that in forest-based enterprise, the percentage of total expenditure on raw materials and average expenditure on raw materials per unit is higher in Dimapur. In mineral-based enterprise, the percentage of total expenditure on raw materials is higher in Phek but average expenditure on raw materials per unit is higher in Dimapur. In agro-based enterprise, the percentage expenditure on raw materials is higher in Phek but the average expenditure on raw materials per unit is higher in Dimapur. The percentage expenditure of raw materials to total expenditure on raw materials is slightly higher in Dimapur which is 55.78 percent as compared to Kohima and Phek.

Table III.15: Resource-based expenditure on raw material (in Rs.)

Resource-based enterprise	Units	Raw materials	Avg. Raw materials	Percentage to total expenditure
Dimapur				
Forest-based enterprise	13 (33.33)	1810000 (29.12)	139230.77	70.02
Mineral-based enterprise	17 (43.59)	3790000 (60.98)	222941.18	50.74
Agro-based enterprise	9 (23.08)	615000 (9.90)	68333.33	55.87
Total	**39 (45.88)**	**6215000 (54.48)**	**159358.97**	**55.78**
Kohima				
Forest-based enterprise	7 (21.21)	905000 (26.48)	129285.71	61.31
Mineral-based enterprise	14 (42.42)	2195000 (64.24)	156785.71	51.07
Agro-based enterprise	12 (36.37)	317000 (9.28)	26416.67	63.65
Total	**33 (38.82)**	**3417000 (29.95)**	**103545.5**	**54.48**
Phek				
Forest-based enterprise	5 (38.46)	275000 (15.49)	55000	65.61
Mineral-based enterprise	2 (15.39)	1200000 (67.59)	600000	47.87
Agro based enterprise	6 (46.15)	300500 (16.92)	50083.33	65.28
Total	**13 (15.30)**	**1775500 (15.56)**	**136576.9**	**52.43**
Overall				
Forest-based enterprise	25 (29.41)	2990000 (26.21)	119600	66.74
Mineral-based enterprise	33 (38.82)	7185000 (62.99)	217727.27	50.33
Agro-based enterprise	27 (31.77)	1232500 (10.80)	45648.15	59.85
Total	**85**	**11407500**	**134205.88**	**54.84**

Source: same as table III.1

I.7: Transportation

As depicted in table III.16, out of the total expenditure on transportation which is Rs.23,84,000 in manufacturing sector, Dimapur accounts for 24.75 percent with an average expenditure on transportation of Rs.15,128.21 per unit, Kohima 31.10 percent with an average expenditure on transportation of Rs.22,469.70 per unit and Phek 44.15 percent with an average expenditure on transportation of Rs.80,961.54. In Dimapur, expenditure on transportation in micro enterprises is 51.70 percent with an average expenditure on transportation of Rs.10,892.86 per unit and small enterprises 48.30

percent with an average expenditure on transportation of Rs 25,909.09 per unit. In Kohima, expenditure on transportation in micro enterprises is 41.67 percent with an average expenditure on transportation of Rs.11,444.44 per unit, small enterprises is 55.63 percent with an average expenditure on transportation of Rs.82,500 per unit and medium enterprises is 2.70 percent with an average expenditure on transportation of Rs.20,000 per unit. In Phek, expenditure on transportation in micro enterprises is 4.99 percent with an expenditure on transportation of Rs.4772.73 per unit and small enterprises is 95.01 percent with an average expenditure on transportation of Rs.5,00,000 per unit.

Table III.16: Category wise expenditure on transportation (in Rs.)

Category	Units	Transport	Avg. Transport	Percentage to total expenditure
Dimapur				
Micro	28 (71.79)	305000 (51.70)	10892.86	8.06
Small	11 (28.21)	285000 (48.30)	25909.09	3.94
Total	**39 (45.88)**	**590000 (24.75)**	**15128.21**	5.36
Kohima				
Micro	27 (81.82)	309000 (41.67)	11444.44	9.37
Small	5 (15.15)	412500 (55.63)	82500.00	14.15
Medium	1 (3.03)	20000 (2.70)	20000.00	32.79
Total	**33 (38.82)**	**741500 (31.10)**	**22469.7**	11.82
Phek				
Micro	11 (84.62)	52500 (4.99)	4772.73	5.97
Small	2 (15.38)	1000000 (95.01)	500000.00	39.89
Total	**13 (15.30)**	**1052500 (44.15)**	**80961.54**	31.08
Overall				
Micro	66 (77.64)	666500 (27.96)	10098.48	8.37
Small	18 (21.18)	1697500 (71.20)	94305.56	13.42
Medium	1 (1.18)	20000 (0.84)	20000.00	32.79
Total	**85**	**2384000**	**28047.06**	11.53

Source: same as table III.1

Table III.17: Resource-based expenditure on transportation (in Rs.)

Resource-based enterprise	Units	Transport	Avg. Transport	Percentage to total expenditure
Dimapur				
Forest-based enterprise	13 (33.33)	144000 (24.41)	11076.92	5.57
Mineral-based enterprise	17 (43.59)	172000 (29.15)	10117.65	2.35
Agro-based enterprise	9 (23.08)	274000 (46.44)	30444.44	24.89
Total	**39 (45.88)**	**590000 (24.75)**	**15128.21**	**5.36**
Kohima				
Forest-based enterprise	7 (21.21)	120500 (16.25)	17214.29	8.16
Mineral-based enterprise	14 (42.42)	575500 (77.61)	41107.14	13.39
Agro-based enterprise	12 (36.37)	45500 (6.14)	3791.67	9.14
Total	**33 (38.82)**	**741500 (31.10)**	**22469.70**	**11.82**
Phek				
Forest-based enterprise	5 (38.46)	27500 (2.61)	5500.00	8.39
Mineral-based enterprise	2 (15.39)	1000000 (95.01)	500000.00	6.56
Agro-based enterprise	6 (46.15)	25000 (2.38)	4166.667	5.43
Total	**13 (15.30)**	**1052500 (44.15)**	**80961.54**	**31.08**
Overall				
Forest-based enterprise	25 (29.41)	292000 (12.25)	11680.00	6.52
Mineral-based enterprise	33 (38.82)	1747500 (73.30)	52954.55	12.36
Agro-based enterprise	27 (31.77)	344500 (14.45)	12759.26	16.73
Total	**85**	**2384000**	**15184.71**	**11.53**

Source: same as table III.1

Table III.17 represents resource-based expenditure on transportation where forest-based enterprise accounts for 12.25 percent, mineral-based enterprise 73.30 percent and agro-based enterprise 14.45 percent. Town-wise comparison shows that in forest-based enterprise, the percentage of total expenditure on transportation is higher in Dimapur and average expenditure on transportation per unit is higher in Kohima. In mineral-based enterprise, the percentage of total expenditure on transportation as well as average expenditure on transportation per unit is higher in Phek. In agro-based enterprise, percentage expenditure on transportation as well as average expenditure on transportation per unit is higher in Dimapur. The percentage expenditure of

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transportation to total expenditure on transportation is higher in Phek which is 31.08 percent as compared to Dimapur and Kohima.

I.8: Miscellaneous

The expenditure on miscellaneous includes expenditure on wear and tear, maintenance of machinery, etc. Out of the total expenditure on miscellaneous which is Rs.15,95,900 in manufacturing sector, Dimapur accounts for 38.14 percent with an average miscellaneous expenditure of Rs.15,607.69 per unit, Kohima 52.30 percent with an average miscellaneous expenditure of Rs.25,293.94 per unit and Phek 9.56 percent with an average miscellaneous expenditure of Rs.11,730.77 per unit.

Table III.18: Category wise expenditure on miscellaneous (in Rs.)

Dimapur				
Category	Units	Miscellaneous	Avg. miscellaneous	Percentage to total expenditure
Micro	28 (71.79)	158700 (26.07)	5667.86	4.19
Small	11 (28.21)	450000 (73.93)	40909.09	6.22
Total	**39 (45.88)**	**608700 (38.14)**	**15607.69**	5.52
Kohima				
Micro	27 (81.82)	224700 (26.92)	8322.22	6.82
Small	5 (15.15)	610000 (73.08)	122000.00	20.93
Medium	1 (3.03)	-	-	-
Total	**33 (38.82)**	**834700 (52.30)**	**25293.94**	13.31
Phek				
Micro	11 (84.62)	47500 (31.15)	4318.18	5.40
Small	2 (15.38)	105000 (68.85)	52500.00	4.19
Total	**13 (15.30)**	**152500 (9.56)**	**11730.77**	4.50
Overall				
Micro	66 (77.64)	430900 (27.00)	6528.79	5.41
Small	18 (21.18)	1165000 (73.00)	64722.22	9.21
Medium	1 (1.18)	**-**	**-**	-
Total	**85**	**1595900**	**18775.29**	7.72

Source: same as table III.1

In Dimapur, miscellaneous expenditure in micro enterprises constitute 26.07 percent with an average miscellaneous expenditure of Rs.5667.86 per unit and small enterprises 73.93 percent with an average miscellaneous expenditure of Rs 40,909.09 per unit. In Kohima, miscellaneous expenditure in micro enterprises constitute 26.92 percent with an average miscellaneous expenditure of Rs.8322.22 per unit and small enterprises 73.08 percent with an average miscellaneous expenditure of Rs.1,22,000 per unit. In Phek, miscellaneous expenditure in micro enterprises constitute 31.15 percent with an average miscellaneous expenditure of Rs.4318.18 per unit and small enterprises 68.85 percent with an average miscellaneous expenditure of Rs.52,500 per unit.

Table III.19 represents resource based expenditure on miscellaneous where forest-based enterprise accounts for 19.23 percent, mineral-based enterprise 73.01 percent and agro-based enterprise 7.75 percent. Town-wise comparison shows that in forest-based enterprise, Dimapur has a higher percentage of total expenditure on miscellaneous and average expenditure on miscellaneous per unit is higher in Kohima. In mineral-based enterprise, Kohima has a higher percentage of total expenditure on miscellaneous as well as average expenditure on miscellaneous per unit. In agro-based enterprise, percentage expenditure on transportation is higher in Phek but average expenditure on miscellaneous per unit is higher in Dimapur. The percentage expenditure of miscellaneous to total expenditure on miscellaneous is higher in Kohima which is 13.31 percent as compared to Dimapur and Phek.

Table III.19: Resource-based expenditure on miscellaneous (in Rs.)

Dimapur				
Resource-based enterprise	Units	Miscellaneous	Avg. miscellaneous	Percentage to total expenditure
Forest-based	13 (33.33)	168000 (27.60)	12923.08	6.50
Mineral-base enterprise	17 (43.59)	395700 (65.01)	23276.47	5.40
Agr- based enterprise	9 (23.08)	45000 (7.39)	5000.00	4.09
Total	**39 (45.88)**	**608700 (38.84)**	**15607.69**	**5.52**
Kohima				
Forest-based enterprise	7 (21.21)	108500 (13.00)	15500.00	7.35
Mineral-based enterprise	14 (42.42)	671200 (80.41)	47942.86	15.62
Agro-based enterprise	12 (36.37)	55000 (6.59)	4583.33	11.04
Total	**33 (38.82)**	**834700 (53.25)**	**25293.94**	**13.31**
Phek				
Forest-based enterprise	5 (38.46)	25000 (16.39)	5000.00	5.96
Mineral-based enterprise	2 (15.39)	105000 (68.85)	52500.00	3.09
Agro-based enterprise	6 (46.15)	22500 (14.75)	3750	4.67
Total	**13 (15.30)**	**152500 (7.91)**	**9538.46**	**3.66**
Overall				
Forest-based enterprise	25 (29.41)	301500 (19.23)	12060.00	6.73
Mineral-based enterprise	33 (38.82)	1144400 (73.01)	34678.79	8.10
Agro-based enterprise	27 (31.77)	121500 (7.75)	4500.00	5.90
Total	**85**	**1595900**	**9983.44**	**7.58**

Source: same as table III.1

I.9: Regression Analysis

A regression analysis is carried out to find the relationships between the output (Gross Monthly Income and Net Monthly Income) and the various costs involved in the process of production in manufacturing sector.

The variables affecting total output is expressed in the form of equation as

$$Y = f(X_1, X_2, \ldots, X_n) \qquad \text{-------------------- (i)}$$

Where,   Y= Output, X_1= Wages, X_2= Rent, X_3= Electricity, X_4= Raw material,

X_5= Transport and X_6= Miscellaneous

In analysing the factors determining Y_t, a multiple linear regression model has been applied, as such

$$Y_t = b_0 + b_1 X_1 + b_2 X_2 + \ldots + bn\ Xn + e^t \qquad \text{---------------------------- (ii)}$$

Where,

Y= Gross monthly income

b_0= Constant

b_1, b_2,…,bn= Regression coefficient of wages, rent, electricity, raw material, transport and miscellaneous.

X_1, X_2, …, Xn= Independent variables wages, rent, electricity, raw material, transport and miscellaneous.

t= (1,2,3,…,85)

e^t= Error term (representing the remaining variation in Y that cannot be explained by a linear relationship with X)

Table III.20: Regression results of GMI and items of expenditure

Variables	Overall Coefficients	Dimapur Coefficients	Kohima Coefficients	Phek Coefficients
Constant	13677.64 (3.15)	14534.45 (3.15)	-3203.86 (-0.28)	4281.28 (1.75)
Wages (X_1)	0.99 (12.40***)	0.86 (9.12***)	1.02 (6.22***)	0.91 (5.15**)
Rent (X_2)	0.98 (1.21)	-0.15 (-0.22)	12.54 (2.31*)	3.28 (3.58*)
Electricity (X_3)	1.17 (16.69***)	1.25 (16.40***)	2.76 (0.60)	3.52 (2.18)
Raw material (X_4)	1.06 (34.83***)	1.08 (33.45***)	1.08 (10.68***)	1.07 (57.85***)
Transportation (X_5)	0.93 (20.11***)	1.11 (8.50***)	0.89 (1.89)	1.01 (32.47***)
Miscellaneous (X_6)	1.55 (16.10***)	1.75 (5.54***)	1.15 (4.13***)	0.44 (0.98)
R^2	0.99	0.99	0.99	0.99
N	85	39	33	13

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

The regression analysis of GMI with cost variables in the three towns for manufacturing sector is analysed and interpreted from the table III.20. In the overall analysis, all variables show expected sign which is having a positive effect on GMI. That is, a 10 percent increase in all the given variables will increase GMI by 9.9 percent, 9.8 percent, 11.7 percent, 10.6 percent, 9.3 percent and 15.5 percent of X_1, X_2, X_3, X_4, X_5 and X_6 respectively. In Dimapur, all variables, except rent, demonstrate a positive effect on GMI and the reason for a negative effect of rent might be due to higher rent. Likewise, in Kohima and Phek all the factors of production reveal a positive effect on GMI. As shown in the regression result, in Overall as well as in Dimapur, Kohima and Phek, the coefficient of determination is $R^2 = 0.99$ which implies that 99 percent of the variation in output is explained by the given variables.

Table III.21: Regression results of NMI and items of expenditure

Variables	Overall Coefficients	Dimapur Coefficients	Kohima Coefficients	Phek Coefficients
Constant	13678.44 (3.15)	14535.17 (3.15)	-3202.87 (-0.28)	4282.29 (1.75)
Wages (X_1)	-0.01 (-0.11)	-0.13 (-1.45)	0.02 (0.13)	-0.09 (-0.52)
Rent (X_2)	-0.02 (-0.02)	-1.15 (-1.77)	11.54 (2.12*)	2.28 (2.49*)
Electricity (X_3)	0.17 (2.45*)	0.25 (3.31**)	1.76 (0.38)	2.52 (1.56)
Raw material (X_4)	0.06 (2.09*)	0.08 (2.61*)	0.08 (0.83)	0.07 (3.99*)
Transportation (X_5)	-0.07(-1.42)	0.11 (0.87)	-0.11 (-0.24)	0.01 (0.40)
Miscellaneous (X_6)	0.55 (5.74***)	0.75 (2.37*)	0.14 (0.54)	-0.56 (-1.27)
R^2	0.57	0.80	0.60	0.97
N	85	39	33	13

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

Similarly, regression analysis of NMI with cost variables in the three towns for manufacturing sector is analysed and interpreted from the table III.21. In the overall analysis, variables like electricity, raw material and miscellaneous display a positive effect on NMI which implies that cost on these variables brings additional profit to entrepreneurs. On the other hand, variables like wages, rent and transportation exhibit a negative effect on NMI indicating that additional cost on these variables decreases entrepreneur's level of profit. That is a 10 percent increase in the independent variables will increase NMI by1.7 percent (X_3), 0.6 percent (X_4), 5.5 percent X_6 and is expected to decrease NMI by 0.1 percent (X_1), 0.2 percent (X_2) and 0.7 percent (X_5) Likewise, variables like electricity, raw material, transportation and miscellaneous in Dimapur, variables like wages, rent, electricity, raw material, and miscellaneous in Kohima and variables like rent, electricity, raw material and transportation in Phek depict a positive

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effect on NMI indicating that additional cost on these variables increases NMI. On the other hand, variables like wages and rent in Dimapur, transportation in Kohima and wages and miscellaneous in Phek show a negative effect on NMI indicating that additional cost on these variables for the towns respectively is not desirable or favourable. Here, the given variables explained 57 percent, 80 percent, 60 percent and 97 percent of the variation in NMI with respect to Overall, Dimapur, Kohima and Phek.

Table III.22: Regression results of GMI and items of expenditure in micro enterprise

	Overall	Dimapur	Kohima	Phek
Variables	Coefficients	Coefficients	Coefficients	Coefficients
Constant	11202.65 (2.13)	12008.03 (3.52)	-9042.91 (-0.75)	6000.98 (1.63)
Wages (X_1)	0.91 (5.34***)	1.24 (7.10***)	-0.13 (-0.26)	0.78 (3.04*)
Rent (X_2)	1.56 (1.08)	-0.51 (-0.74)	6.76 (0.96)	3.80 (3.32*)
Electricity (X_3)	6.54 (2.53*)	-4.42 (-2.32*)	17.30 (2.20*)	4.62 (1.98)
Raw material (X_4)	1.00 (14.94***)	1.11 (28.06***)	1.34 (6.80***)	1.11 (20.21***)
Transportation (X_5)	1.18 (3.66**)	1.07 (5.59***)	-0.90 (-0.89)	0.41 (0.65)
Miscellaneous (X_6)	1.00 (2.62*)	2.28 (4.94***)	2.54 (2.71*)	0.25 (0.15)
R^2	0.96	0.99	0.97	0.99
N	66	28	27	11

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
(iii), ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

In the category of micro enterprise, all variables show expected sign which is having a positive effect on GMI. That is, a 10 percent increase in all the given variables will increase GMI by 9.1 percent, 15.6 percent, 65.4 percent, 10 percent, 11.8 percent and 10 percent of X_1, X_2, X_3, X_4, X_5 and X_6 respectively. In Dimapur, all variables, except rent and electricity, show a positive effect on GMI and the reason for a negative effect of rent might be due to higher rent and unproductive consumption of electricity.

Likewise, in Kohima, except for wages and transportation, all variables show a positive effect on GMI and in Phek all the variables demonstrate a positive effect on GMI. As shown in the regression result, in overall, Dimapur, Kohima and Phek, the coefficient of determination is $R^2 = 0.96$, $R^2 = 0.99$, $R^2 = 0.97$ and $R^2 = 0.99$ respectively which implies that 4 percent, 1 percent, 3 percent and 1 percent of the variation in the dependent variable correspondingly is not explained by the given independent variables.

Table III.23: Regression results of NMI and items of expenditure in micro enterprise

	Overall	Dimapur	Kohima	Phek
Variables	Coefficients	Coefficients	Coefficients	Coefficients
Constant	11203.56 (1.19)	12008.76 (3.52)	-9041.8 (-0.75)	6001.95 (1.63)
Wages (X_1)	-0.09 (-0.51)	0.240554 (1.38)	-1.13 (-2.24*)	-0.24 (-0.88)
Rent (X_2)	0.56 (0.52)	-1.5141 (-2.18*)	5.76 (0.82)	2.80 (2.45)
Electricity (X_3)	5.54 (2.15*)	-5.42202 (-2.85*)	16.30 (2.07)	3.62 (1.56)
Raw material (X_4)	0.003 (0.05)	0.114222 (2.88**)	0.34 (1.74)	0.11 (2.08)
Transportation (X_5)	0.19 (0.58)	0.068292 (0.36)	-1.90 (-1.87)	-0.59 (-0.93)
Miscellaneous (X_6)	-7.4E-05 (-0.0002)	1.283637 (2.78**)	1.54 (1.64)	-0.75 (-0.46)
R^2	0.15	0.52	0.48	0.91
N	66	28	27	11

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent,5 percent and 1 percent significance level*

In overall regression analysis of micro enterprise, variables like rent, electricity, raw material and transportation have a positive effect on NMI which implies that cost on these variables brings additional net income to entrepreneurs. On the other hand, variables like wages, and miscellaneous have a negative effect on NMI indicating that additional cost on these variables decreases entrepreneur's level of net income.

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Likewise, variables like wages, raw material, transportation and miscellaneous in Dimapur, variables like rent, electricity, raw material, and miscellaneous in Kohima and variables like rent, electricity and raw material in Phek show a positive effect on NMI indicating that additional cost on these variables increases NMI. On the other hand, variables like rent and electricity in Dimapur, wages and transportation in Kohima and wages, transportation and miscellaneous in Phek show a negative effect on NMI indicating that additional cost on these variables for the towns respectively is not favourable. Here, the given variables explained 15 percent, 52 percent, 48 percent and 91 percent of the variation in NMI with respect to Overall, Dimapur, Kohima and Phek respectively.

Table III.24: Regression results of GMI and items of expenditure in small enterprise

	Overall	Dimapur
Variables	Coefficients	Coefficients
Constant	19164.14 (1.15)	7994.11 (0.19)
Wages (X_1)	0.96 (7.75***)	0.67 (2.30)
Rent (X_2)	0.39 (0.16)	-3.60 (-0.80)
Electricity (X_3)	1.20 (8.92***)	1.41 (5.08**)
Raw material (X_4)	1.07 (24.87***)	1.13 (12.04***)
Transportation (X_5)	0.92 (17.28***)	1.31 (2.70)
Miscellaneous (X_6)	1.59 (14.12***)	2.51 (1.68)
R^2	0.99	0.99
N	18	11

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

In the category of small enterprise, the regression equations with all variables show expected sign which is having a positive effect on GMI showing that a 10 percent increase in all the given variables will increase GMI by 9.6 percent, 3.9 percent, 12 percent, 10.7 percent, 9.2 percent and 15.9 percent of X_1, X_2, X_3, X_4, X_5 and X_6

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respectively. In Dimapur, all variables, except rent, show a positive effect on GMI and the reason for a negative effect of rent might be due to higher rent which shows that a 10 percent additional cost will decrease the dependent variable by 36 percent.

Table III.25: Regression results of NMI and items of expenditure in small enterprise

	Overall	Dimapur
Variables	Coefficients	Coefficients
Constant	19165.2 (1.15)	7996.65 (0.19)
Wages (X_1)	-0.04 (-0.35)	-0.34 (-1.21)
Rent (X_2)	-0.62 (-0.25)	-4.60 (-1.03)
Electricity (X_3)	0.20 (1.47)	0.41 (1.47)
Raw material (X_4)	0.07 (1.60)	0.13 (1.36)
Transportation (X_5)	-0.08 (-1.46)	0.31 (0.64)
Miscellaneous (X_6)	0.59 (5.23***)	1.51 (1.01)
R2	0.84	0.77
N	18	11

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level.*

The regression equations of small enterprise with all variables show that factors like electricity, raw materials and miscellaneous have a positive impact on NMI. This indicates that a 10 percent increase in these variables will increase NMI by 2 percent, 0.7 percent and 5.9 percent respectively. While rent, wages and transportation have a negative impact on NMI indicating that higher expenditure on these variables will only reduce NMI. Likewise in Dimapur, except wages and rent, other variables have a positive impact on NMI.

In Kohima and Phek the number of observation in small enterprise is very small and as such the analysis did not expect to behave well. In medium enterprise too, the number of observation is not sufficient to run the analysis. Therefore, they are not included in regression analysis.

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I.10: Cobb-Douglas Production function

The origins of the Cobb-Douglas form date back to the seminal work of Cobb and Douglas (1928), who used data for the U.S. manufacturing sector for 1899-1922. The Cobb-Douglas Production Function is the most ubiquitous form of theoretical and empirical analyses of growth and productivity. The estimation of the parameters of aggregate production functions is central to much work on growth, technological change, productivity and labour. Therefore in this analysis Cobb-Douglas Production Function is used.

In the production system, the output of an enterprise mainly depends on the number of inputs used. As such in this study, output is subject to the function of labour and capital. Labour here will mean payments to all persons who directly or indirectly contribute to the working of the enterprise. It also includes self-employed even without any pay. It may now be noted that labour's working days/hours are converted into monetary terms. Capital is defined as all operating cost which is other than wages as such it includes expenditure on rent, electricity, transportation, raw materials and miscellaneous. Initial investment, fixed assets and age of the firm are kept constant to see how wages and capital determines the value of output.

Factor elasticity which is defined as the percentage change in output due to the percentage change in factor input keeping other thing constant is given by the formula

$eL=\delta q/L.L/q,$

$eK= \delta q/ \delta K.K/q$

where, eL and eK are the factor elasticity of labour and capital respectively.

For this analysis, the Cobb-Production function is given as

$$Q(L,K) = AL^{\beta 1} K^{\beta 2} \qquad \text{-------------------- (iii)}$$

Where , Q= Total output or Gross monthly income,

A= Total factor productivity which is constant and independent of labour

and capital,

L= Labour input, K= Capital input,

β_1 = Output elasticity of labour, β_2= Output elasticity of capital

Here A, β_1 and β_2 are the unknown parameters.

We know that,

when $\beta_1 + \beta_2 = 1$, it is a case of constant return to scale,

when $\beta_1 + \beta_2 < 1$, it is a case of decreasing return to scale and

when $\beta_1 + \beta_2 > 1$, it is a case of increasing return to scale.

By keeping K constant, the partial differential equation will be

$$dQ/dL = \beta_1 Q/L$$

which yields

$$Q(l,Ko) = C_1 (Ko) L^{\beta}_1 \text{-------------------------(iv)}$$

And by keeping L constant, the partial differentiation will yield

$$Q(LoK) = C_2 (Lo)^{\beta}_2 \text{-------------------------- (v)}$$

Thus, if $\beta_1 + \beta_2 = 1$, then there is constant return to scale.

Since equation (iii) is not a linear equation, the natural log is used to convert the equation into linear equation. Therefore, equation (iii) can be rewritten as

$$\ln(Q) = \ln(A) + \beta_1 * \ln(L) + \beta_2 * \ln(K) + e^t \text{-----------------------(vi)}$$

$$\ln(Q) = \ln(A) + \beta_1 * \ln(L) + \beta_2 * \ln(K)$$

$$=1.414422 + 0.16*\ln(L) + 0.77*\ln(K)$$

From the above equation, the output elasticity of labour (β_1) and capital (β_2) is 0.16 and 0.77 respectely. In other words, if labour input is increased by 10 percent, output will increase by an estimated 1.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.7 percent of output. This result shows that there is decreasing returns to scale since $\beta_1 + \beta_2 = 0.93$ is less than 1 and given the two inputs, the additional capital input will be preferred to labour input because output elasticity of capital is higher than the output elasticity of labour. The R^2 value 0.99 means that 99 percent of the variation in the output is explained by labour and capital. Since manufacturing sector is operating under decreasing return to scale, hypothesis 2 is accepted.

In micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.14 and 0.77 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.4 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.7 percent of output exhibiting a decreasing returns to scale. The value of $R^2 = 0.97$ indicates 97 percent of the variation in the output is explained by labour and capital.

In small enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.19 and 0.71 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.9 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.1 percent of output exhibiting a decreasing returns to scale. The value of $R^2 = 0.99$ indicates 99 percent of the variation in the output is explained by labour and capital. The elasticity of labour is

higher in small enterprise when compared with micro enterprise and elasticity of capital is higher in micro enterprise when compared with the small enterprise.

Table III.26: Cobb-Douglas production function and covariance (Category-wise)

Estimated Cobb-Douglas Production Function and Covariance			
		Category	
Variable	Overall	Micro	Small
Coefficient	1.414422 (9.77)	1.506575 (6.01)	1.780602 (7.96)
Labour	0.167567 (8.15)	0.146584 (4.67)	0.196906 (7.32)
Capital	0.77121 (43.29)	0.779636 (38.35)	0.718034 (26.42)
Labour x labour	1.457728	0.59436	1.1636
Capital x capital	1.942913	1.41498	1.13995
Labour x capital	1.249453	0.50261	0.89266
R^2	0.99	0.97	0.99
Adj. R^2	0.984923	0.973766	0.993581
e*e	1.929253	215.58	17.9117
σ_u	0.023527	3.42191	1.19411
N	85	66	18
F test			
Overall	0.000635 (3.15[#])	0.001806 (3.15[#])	0.001769 (3.68[#])
Labour	0.475359 (4.001[#])	1.225382 (4.001[#])	0.554282 (4.49[#])
Capital	0.026941 (4.001[#])	0.048259 (4.001[#])	0.069744 (4.49[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) # sign indicates critical F-value (iii) N= No. of observations (iv) There is one medium enterprise.

The calculated F-statistic is 0.000635 which is lower than the critical F-value of 3.15. Similarly, the estimated F-value in both labour and capital is lower than the critical F-value of 4.001. The calculated F value in micro enterprise and small enterprise at 0.002 each is lower than the critical F-value of 3.15 and 3.68 respectively, and also the calculated F values for labour and capital is lower than the critical F values.

It may be noted that the output elasticity of capital is higher than the output elasticity of labour in all respect. It is observed that capital plays a more important role

in the additional output and hence, concludes that manufacturing sector is capital intensive and hypothesis 3 is accepted.

In forest-based enterprise (table III.27), the output elasticity of labour (β_1) and capital (β_2) is 0.14 and 0.77 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.4 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.7 percent of output exhibiting a decreasing returns to scale. The value of $R^2 = 0.99$ indicates 99 percent of the variation in the output is explained by labour and capital.

Table III.27: Cobb-Douglas production function and covariance (Resource-based)

Estimated Cobb-Douglas Production Function and Covariance				
		Resourced-based		
Variable	Overall	Forest-based	Mineral-based	Agro-based
Coefficient	1.414422	1.55409	1.344358	1.063304
	(9.77)	(7.84)	(4.59)	(2.74)
Labour	0.167567	0.14923	0.132243	0.245146
	(8.15*)	(6.52*)	(3.29*)	(5.19*)
Capital	0.77121	0.773026	0.80772	0.738684
	(43.29*)	(46.11*)	(19.31*)	(23.10*)
Labour x labour	1.457728	0.789642	4.562133	0.52689
Capital x capital	1.942913	1.469982	1.878507	1.14994
Labour x capital	1.249453	0.587165	1.959884	0.39062
R^2	0.99	0.99	0.98	0.97
Adj. R^2	0.984923	0.993285	0.978468	0.972172
e*e	1.929253	21.43026	103.5804	84.5857
σ_u	0.023527	0.974103	3.452678	3.5244
N	85	25	33	27
F test				
Overall	0.000635	0.003078	0.000348	0.000106
	(3.15#)	(3.44#)	(3.32#)	(3.40#)
Labour	0.475359	0.91663	0.165055	1.081449
	(4.001#)	(4.28#)	(4.17#)	(4.24#)
Capital	0.026941	0.0235046	0.019681	0.059382
	(4.001#)	(4.28#)	(4.17#)	(4.24#)

Note: (i) Figure in parenthesis indicates t-value, (ii) # sign indicates critical F-value (iii) N= No. of observations

In mineral-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.13 and 0.80 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.3 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 8 percent of output exhibiting a decreasing returns to scale. The value of $R^2 = 0.98$ indicates 98 percent of the variation in the output is explained by labour and capital.

In agro-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.24 and 0.73 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 2.4 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.3 percent of output exhibiting a decreasing returns to scale. The value $R^2 = 0.97$ indicates 97 percent of the variation in the output is explained by labour and capital. While comparing the elasticity of labour among resourced based enterprises, it is higher in agro-based enterprise and in comparing the elasticity of capital, it is higher in mineral-based enterprise.

As shown in table III.27, the calculated F value in forest-based enterprise, mineral-based enterprise and agro-based enterprise is lower than the critical F-value.

It may also be noted from the table that the output elasticity of capital is higher than the output elasticity of labour in all respect indicating that capital plays a more prominent role in the additional output.

Table III.28: Cobb-Douglas production function and covariance in Dimapur (Category-wise)

Estimated Cobb-Douglas Production Function and Covariance			
Variable	Overall	Category	
		Micro	Small
Coefficient	1.54068 (8.55)	2.266221 (6.66)	2.082642 (8.06)
Labour	0.16869 (7.44*)	0.029768 (1.56)	0.189632 (4.07*)
Capital	0.75901 (31.03*)	0.807959 (26.76*)	0.700343 (14.75*)
Labour x labour	2.97803	2.007152	1.48157
Capital x capital	1.37651	0.803734	1.424734
Labour x capital	1.27685	0.33273	1.314996
R^2	0.99	0.97	0.97
Adj. R^2	0.989278	0.967075	0.967075
e*e	58.276	116.7069	58.19006
σ_u	1.61878	4.168105	7.273757
N	39	28	11
F test			
Overall	0.000757 (3.32[#])	0.007575 (3.39[#])	0.002187 (4.46[#])
Labour	0.232059 (4.17[#])	0.468998 (4.23[#])	0.443244 (5.12[#])
Capital	0.042191 (4.17[#])	0.045886 (4.23[#])	0.063025 (5.12[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) # sign indicates critical F-value (iii) N= No. of observations

In Dimapur (table III.28), the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.16 and 0.75 respectively showing a decreasing return to scale and the output elasticity of capital is higher than the output elasticity of labour. The value of R^2 is 0.99 which shows that 99 percent of the variation in the output is explained by labour and capital. The estimated F value is 0.0007 which is lower than the critical F value of 3.32.

In micro enterprise, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.029 and 0.80 respectively which indicates a decreasing return to scale. The value of $R^2 = 0.97$ indicates 97 percent of the variation in the output is explained by labour and capital.

In small enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.18 and 0.70 respectively which shows a decreasing return to scale. The value of $R^2 = 0.97$ indicates 97 percent of the variation in the output is explained by labour and capital. The elasticity of labour is higher in micro enterprise when compared with small enterprise and also elasticity of capital is higher in micro enterprise when compared with the small enterprise. As shown in table III.28, the calculated F-value of micro enterprise and small enterprise is lower than the critical F-value.

In forest-based enterprise (table III.29), the output elasticity of labour (β_1) and capital (β_2) is 0.02 and 0.84 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 0.2 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 8.4 percent of output indicating a decreasing returns to scale. The value of R^2 is 0.98 indicating that 98 percent of the variation in the output is explained by labour and capital.

In mineral-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.15 and 0.79 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.5 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.9 percent of output exhibiting a decreasing returns to scale. The value of R^2 is 0.99 which indicates 99 percent of the variation in the output is explained by labour and capital.

In agro-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.21 and 0.65 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 2.1 percent holding capital input constant

and holding labour constant, 10 percent increase in capital would increase 6.5 percent of output exhibiting a decreasing returns to scale. The value of R^2 is 0.97 which indicates 97 percent of the variation in the output is explained by labour and capital. While comparing the elasticity of labour among resource-based enterprises, it is higher in forest-based enterprise and in comparing the elasticity of capital, it is higher in forest-based enterprise.

Table III.29: Cobb-Douglas production function and covariance in Dimapur (Resource-based)

Estimated Cobb-Douglas Production Function and Covariance				
Variable	Overall	Resourced-based		
		Forest-based	Mineral-based	Agro-based
Coefficient	1.54068	1.93519	1.24492	2.298777
	(8.55)	(3.95)	(5.08)	(4.38)
Labour	0.16869	0.02623	0.15328	0.216307
	(7.44)	(1.27)	(4.27)	(3.94)
Capital	0.75901	0.84172	0.79538	0.656281
	(31.03)	(18.37)	(19.66)	(13.61)
Labour x labour	2.97803	.35374	2.349826	0.533723
Capital x capital	1.37651	0.88614	1.848195	0.692148
Labour x capital	1.27685	0.79832	1.818476	0.305213
R^2	0.99	0.98	0.99	0.98
Adj. R^2	0.989278	0.97266	0.993117	0.976909
e*e	58.276	15.899	15.89901	7.36217
σ_u	1.61878	1.13564	1.135643	1.227028
N	39	13	17	9
F test				
Overall	0.000757	0.002551	0.000336	0.008841
	(3.32[#])	(410[#])	(3.74[#])	(5.14[#])
Labour	0.232059	0.217796	0.305101	1.150737
	(4.17[#])	(4.84[#])	(4.54[#])	(5.59[#]
Capital	0.042191	0.025053	0.022654	0.17069
	(4.17[#])	(4.84[#])	(4.54[#])	(5.59[#])

Note: (i) Figure in parenthesis indicates t-value, (ii)[#] sign indicates critical F-value (iii) N= No. of observations

The calculated F value in forest-based enterprise, mineral-based enterprise and agro-based enterprise is lower than the critical F-value.

The output elasticity of capital is higher than the output elasticity of labour in all respect indicating that capital plays a more prominent role in the additional output.

As shown in table III.30, in Kohima, the output elasticity of labour (β_1) and capital (β_2) is 0.17 and 0.77 respectively showing a decreasing return to scale and the output elasticity of capital is higher than the output elasticity of labour. The value of R^2 is 0.98 which shows that 98 percent of the variation in the output is explained by labour and capital. The estimated F value is 0.0004 which is lower than the critical F value of 3.32.

Table III.30: Cobb-Douglas production function and covariance in Kohima (Category-wise)

Estimated Cobb-Douglas Production Function and Covariance			
Variable	Overall	Category	
		Micro	Small
Coefficient	1.312868 (4.27)	1.466154 (3.30)	0.9313 (1.59)
Labour	0.172135 (3.90)	0.137913 (2.13)	0.222489 (5.57)
Capital	0.7787 (20.59)	0.792164 (18.14)	0.764285 (16.63)
Labour x labour	1.454427	0.794553	0.797511
Capital x capital	1.98495	1.747621	0.602099
Labour x capital	1.2469	0.792025	0.269479
R^2	0.98	0.97	0.99
Adj. R^2	0.974123	0.964248	0.991095
e*e	108.4252	114.3497	3.869986
σ_u	3.614175	4.76457	1.934993
N	33	27	5
F test			
Overall	0.000407 (3.32[#])	0.001185 (3.40[#])	9.02E-05 (19.00[#])
Labour	0.471224 (4.17[#])	0.743194 (4.24[#])	0.75801 (10.13[#])
Capital	0.024673 (4.17[#])	0.024717 (4.24[#])	0.09228 (10.13[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

In micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.13 and 0.79 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.3 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.9 percent of output which shows a decreasing returns to scale. The value of $R^2 = 0.97$ indicates 97 percent of the variation in the output is explained by labour and capital.

In small enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.22 and 0.76 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 2.2 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.6 percent of output which shows a decreasing returns to scale. The value of $R^2 = 0.99$ indicates 99 percent of the variation in the output is explained by labour and capital. The elasticity of labour is higher in small enterprise when compared with micro enterprise and also elasticity of capital is higher in micro enterprise when compared with the small enterprise.

As shown in table III.30, the calculated F-value of micro enterprise and small enterprise is lower than the critical F-value.

In forest-based enterprise (table III.31), the output elasticity of labour (β_1) and capital (β_2) is 0.17 and 0.73 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.3 percent of output indicating a decreasing returns to scale. The value of R^2 is 0.99

indicating that 99 percent of the variation in the output is explained by labour and capital.

Table III.31: Cobb-Douglas production function and covariance in Kohima (Resource-based)

Estimated Cobb-Douglas Production Function and Covariance				
Variable	Overall	Resourced-based		
		Forest-based	Mineral-based	Agro-based
Coefficient	1.312868	1.748637	1.361735	-0.81311
	(4.27)	(48.37)	(1.97)	(-0.66))
Labour	0.172135	0.175899	0.111307	0.454294
	(3.90)	(35.67)	(1.37)	(3.20)
Capital		0.737467	0.828195	0.747281
	0.7787 (20.59)	(203.90)	(10.07)	(13.20)
Labour x labour	1.454427	1.211528	1.666212	0.126158
Capital x capital	1.98495	2.252291	1.666212	0.79355
Labour x capital	1.2469	1.136801	1.178008	0.071096
R^2	0.98	0.99	0.96	0.96
Adj. R^2	0.974123	0.99996	0.95026	0.950706
e*e	108.4252	0.019825	36.22424	55.25244
σ_u	3.614175	0.004956	3.293112	6.13916
N	33	7	14	12
F test				
Overall	0.000407	0.001308	0.000647	0.038264
	(3.32[#])	(6.94[#])	(3.98[#])	(4.26[#])
Labour	0.471224	0.560567	0.473994	2.360488
	(4.17[#])	(6.61[#])	(4.75[#])	(4.96[#])
Capital	0.024673	0.030602	0.018057	0.080482
	(4.17[#])	(6.61[#])	(4.75[#])	(4.96[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

In mineral-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.11 and 0.82 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.1 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 8.2 percent of

output exhibiting a decreasing returns to scale. The value of R^2 is 0.96 which indicates 96 percent of the variation in the output is explained by labour and capital.

In agro-based enterprise, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.45 and 0.74 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.5 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.4 percent of output exhibiting increasing returns to scale. The value of R^2 is 0.96 which indicates 96 percent of the variation in the output is explained by labour and capital. While comparing the elasticity of labour among resource based enterprises, it is higher in agro-based enterprise and in comparing the elasticity of capital, it is higher in mineral-based enterprise. In agro-based enterprise hypothesis 2 cannot be accepted as the coefficients of labour and capital is greater than 1.

The calculated F value (table III.31) in forest-based enterprise, mineral-based enterprise and agro-based enterprise is lower than the critical F-value.

The output elasticity of capital is higher than the output elasticity of labour in all respect indicating that capital plays a more prominent role in the additional output.

In Phek, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.26 and 0.72 respectively showing a decreasing return to scale and the output elasticity of capital is higher than the output elasticity of labour. The value of R^2 is 0.99 which shows that 99 percent of the variation in the output is explained by labour and capital. As shown in table III.32, the estimated F value is 0.00 which is lower than the critical F value of 4.10.

In micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.26 and 0.75 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 2.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.4 percent of output which shows increasing returns to scale. The value $R^2 = 0.96$ indicates 96 percent of the variation in the output is explained by labour and capital.

Table III.32: Cobb-Douglas production function and covariance in Phek (Category-wise)

Estimated Cobb-Douglas Production Function and Covariance		
Variable	Overall	Category
		Micro
Coefficient	0.958417 (2.69)	0.977658 (1.85)
Labour	0.266033 (4.24)	0.261241 (3.56)
Capital	0.720529 (21.15)	0.747281 (17.81)
Labour x labour	0.812798	0.408009
Capital x capital	2.750888	1.329068
Labour x capital	1.27535	0.482714
R^2	0.99	0.96
Adj. R^2	0.994735	0.950706
e*e	7.453386	53.031
σ_u	0.74534	6.628872
N	13	11
F test		
Overall	2.953E-05 (4.10[#])	0.015035 (4.46[#])
Labour	0.66278 (4.84[#])	0.729874 (5.12[#])
Capital	0.02839 (4.84[#])	0.048054 (5.12[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

In forest-based enterprise (table III.33), the output elasticity of labour (β_1) and capital (β_2) is 0.12 and 0.77 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 1.2 percent holding capital input

constant and holding labour constant, 10 percent increase in capital would increase 7.7 percent of output exhibiting a decreasing returns to scale. The value of R^2 is 0.99 which indicates 99 percent of the variation in the output is explained by labour and capital. In agro-based enterprise, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.34 and 0.67 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3.4 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 6.7 percent of output exhibiting increasing returns to scale. The value of R^2 is 0.99 which indicates 99 percent of the variation in the output is explained by labour and capital.

Table III.33: Cobb-Douglas production function and covariance in Phek (Resource-based)

Estimated Cobb-Douglas Production Function and Covariance			
Variable	Overall	Resourced-based	
		Forest-based	Agro-based
Coefficient	0.958417 (2.69)	1.73285 (3.70)	0.714365 (0.94)
Labour	0.266033 (4.24)	0.121702 (2.27)	0.342104 (2.83)
Capital	0.720529 (21.15)	0.77552 36.35)	0.676248 (8.78)
Labour x labour	0.812798	0.15955	0.603519
Capital x capital	2.750888	1.00921	1.491514
Labour x capital	1.27535	0.166154	0.711856
R^2	0.99	0.99	0.99
Adj. R^2	0.994735	0.997627	0.982326
e*e	7.453386	0.73144	7.40955
σ_u	0.74534	0.36572	2.469851
N	13	5	6
F test			
Overall	2.953E-05 (4.10[#])	0.016582 (19.00[#])	9.571E-05 (9.55[#])
Labour	0.66278 (4.84[#])	4.834895 (10.13[#])	0.7171723 (7.71[#])
Capital	0.02839 (4.84[#])	0.049931 (10.13[#])	0.0702745 (7.71[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#]sign indicates critical F-value (iii) N= No. of observations

Since the calculated F value in forest-based enterprise and agro-based enterprise is lower than the critical F-value.

The output elasticity of capital is higher than the output elasticity of labour in all respect indicating that capital plays a more prominent role in the additional output.

It is also observed from the table that the output elasticity of capital is higher in all categories than the output elasticity of labour indicating that capital is playing a bigger role in additional output.

II: Services sector

II.1: Investment

Investment is an important component of an enterprise which helps entrepreneurs to take the leap in their endeavour in the first place. Investment is crucial because the capacity of production of an economy depends on the capital available to produce which in turn increases returns.

Table III.34 shows the category-wise initial finance where 72.96 percent of the entrepreneurs started their business with personal money, 4.29 percent of the enterprise borrowed from private money-lender, 16.31 percent of the enterprise are financed by government and banking institutions and 6.44 percent of the enterprise borrowed from family and friends. Personal financing is most prominent for initial establishment of business in all the categories and this is followed by government and banks in small and medium enterprises.

Table III.34: Category-wise sources of initial finance

Category	Personal	Money-lender	Govt./bank	Family/friends	Total
Micro	125 (78.62)	9 (5.66)	10 (6,29)	15 (9.43)	159 (68.24)
Small	42 (65.63)	1 (1.56)	21 (32.81)	-	64 (27.47)
Medium	3 (30.00)	-	7 (70.00)	-	10 (4.29)
Total	170 (72.96)	10 (4.29)	38 (16.31)	15 (6.44)	233

Source: field survey
*Figure in parenthesis indicates percentage

In shops, 77.30 percent of the enterprise started with their own money, 4.29 percent of the entrepreneurs borrowed from private money-lender, 12.27 percent of the enterprise are financed by government and banks and 6.14 percent of the entrepreneurs borrowed from family and friends in starting their businesses. In transport, 50 percent are personal finance, 6.67 percent of the entrepreneurs borrowed from private money lender, 30 percent of the enterprise are financed by government and banks and 13.33 percent of the entrepreneurs borrowed from family and friends in starting their businesses. In workshops, 88.45 percent of the enterprise started with personal money, 3.85 percent each of the entrepreneurs got finance from private money-lender, government and banks and from family and friends in starting their businesses. In hotels, 42.86 percent of the enterprises are self finance and the remaining 57.14 percent financed by government and banks.

Table III.35: Activity-wise sources of initial finance

Activity	Personal	Money-lender	Govt./bank	Family/friends	Total
Shops	126 (77.30)	7 (4.29)	20 (12.27)	10 (6.14)	163 (69.96)
Transport	15 (50.00)	2 (6.67)	9 (30.00)	4 (13.33)	30 (12.87)
Workshops	23 (88.45)	1 (3.85)	1 (3.85)	1 (3.85)	26 (11.16)
Hotels	6 (42.86)	-	8 (57.14)	-	14 (6.01)
Total	170 (72.96)	10 (4.29)	38 (16.31)	15 (6.44)	233

Source: field survey
*Figure in parenthesis indicates percentage

The distribution of investment in services sector shows that out of the total investment of Rs.7926.775 lakhs (table III.36), Dimapur accounts for 55.18 percent of investment, Kohima 42.78 percent and Phek 2.04 percent. A further classification shows that in Dimapur, micro enterprises constitute 39.12 percent of the investment and small enterprises 56.08 percent and medium enterprises 40 percent; in Kohima, micro enterprises account for 6.85 percent of the investment, small enterprises 17.95 percent and medium enterprises 75.20 percent; and in Phek, micro enterprises cover 65.39 percent of the investment and small enterprises 34.61 percent. In Dimapur and Kohima, average investment is highest in medium enterprises and in Phek average employment is highest in small enterprises. Among the towns, average investment is highest in Dimapur at Rs.43.31 lakhs per unit followed by Kohima and Phek.

Table III.36: Category-wise distribution of investment (in Rs. Lakhs)

Towns	Category	Units	Investment	Average
Dimapur	Micro enterprise	53 (52.48)	171.125 (39.12)	3.23
	Small enterprise	44 (43.56)	2453 (56.08)	55.75
	Medium enterprise	4 (3.96)	1750 (40.00)	437.5
	Total	**101 (43.35)**	**4374.125 (55.18)**	**43.31**
Kohima	Micro enterprise	65 (73.86)	232.35 (6.85)	3.57
	Small enterprise	17 (19.32)	608.5 (17.95)	35.79
	Medium enterprise	6 (6.82)	2550 (75.20)	425
	Total	**88 (37.77)**	**3390.85 (42.78)**	**38.53**
Phek	Micro enterprise	41 (93.18)	105.8 (65.39)	2.58
	Small enterprise	3 (6.82)	56 (34.61)	18.67
	Total	**44 (18.88)**	**161.8 (2.04)**	**3.68**
	Micro enterprise	159 (68.24)	509.275 (6.42)	3.20
	Small enterprise	64 (27.47)	3117.5 (39.33)	48.71
	Medium enterprise	10 (4.29)	4300 (54.25)	430
Overall	**Total**	**233**	**7926.775**	**34.02**

Source: same as table III.1

The distribution of investment in activity-wise in Dimapur shows that out of the total investment of Rs.4374.125 lakhs (table III.37), investment in shops is highest followed by hotels, transport and workshops. In Kohima, out of the total investment of Rs.3390.85 lakhs, investment in hotels is highest and is followed by shops, workshops and transport. In Phek, out of the total investment of Rs.161.8 lakhs, investment in shops is highest and is followed by transport and workshops. Among the towns, average investment in hotels is highest in Dimapur and Kohima and in Phek average investment is highest in transport.

Table III.37: Activity-wise distribution of investment (in Rs. Lakhs)

Towns	Activity	Units	Investment	Average
Dimapur	Shops	75 (74.26)	3270.925 (74.78)	43.61
	Transport	12 (11.88)	189.5 (4.33)	15.79
	Workshops	8 (7.92)	18.7 (0.43)	2.34
	Hotels	6 (5.94)	895 (20.46)	149.17
	Total	**101** (43.35)	**4374.125 (55.18**)	**43.31**
Kohima	Shops	57 (64.77)	455.3 (13.43)	7.99
	Transport	11 (12.50)	81.8 (2.41)	7.44
	Workshops	12 (13.64)	93.75 (2.76)	7.81
	Hotels	8 (9.09)	2760 (81.40)	345
	Total	**88** (37.77)	**3390.85 (42.78**)	**38.53**
Phek	Shops	31 (70.45)	115.05 (71.11)	3.71
	Transport	7 (15.91)	35.55 (21.97)	5.08
	Workshops	6 (13.64)	11.2 (6.92)	1.87
	Total	**44** (18.88)	**161.8 (2.04**)	**3.68**
Overall	Shops	163 (69.96)	3841.275 (48.46)	23.57
	Transport	30 (12.87)	306.85 (3.87)	10.23
	Workshops	26 (11.16)	123.65 (1.56)	4.76
	Hotels	14 (6.01)	3655 (46.11)	261.07
	Total	**233**	**7926.775**	**34.02**

Source: same as table III.1

II.2: Items of Expenditure

Table III.38: Items of monthly expenditure

Items of expenditure	Amount (in Rs.)	Percent to total Expenditure
Wages	7313800	61.61
Rent	1769302	14.90
Electricity	652412	5.50
Miscellaneous	2135654	17.99
Total	**11871168**	**100.00**

Source: same as table III.1

The total expenditure in services sector is Rs. 11871168 of which wages is Rs. 73,13,800 (61.61 percent), rent is Rs. 17,69,302 (14.90 percent), electricity is 652412 (5.50 percent) and miscellaneous is 21,35,654 (17.99 percent). Among the items of expenditure, wages is the single largest item of expenditure and followed by miscellaneous, rent and electricity.

II.3: Wages

Services sector employ 1062 workers and total expenditure on this employment is Rs.73,13,800 with an average wage of Rs.6886.82 per worker. Out of this, the expenditure on wage in Dimapur, Kohima and Phek are 65.03 percent, 29.43 percent and 5.54 percent respectively. In Dimapur, expenditure on wage in small enterprises is highest with 46.31 percent, while the average wage is highest in medium enterprise which is Rs. 9714.29 per worker. In Kohima, expenditure on wage (51.38 percent), as well as the average expenditure on wage (Rs. 6320) is highest in medium enterprises. In Phek, while expenditure on wage (89.14 percent) is higher in micro enterprises, the average expenditure on wage (Rs.7333.33) is higher in small enterprises. Among the towns, higher wages is incurred by Dimapur in all the categories. Looking at the percentage expenditure to total expenditure, 62.31 percent of the expenditure is on

wages in Dimapur and 61.45 percent of the expenditure is on wages in Kohima and in

Phek, 55.08 percent of the expenditure is on wages.

Table III.39: Category-wise expenditure on wages (in Rs.)

Towns	Category	Units	Employment	Wage	Avg. wage	% to total expenditure
Dimapur	Micro enterprise	53 (52.48)	123 (20.33)	853500 (17.95)	6939.02	64.27
	Small enterprise	44 (43.56)	307 (50.74)	2202500 (46.31)	7174.27	51.83
	Medium enterprise	4 (3.96)	175 (28.93)	1700000 (35.74)	9714.29	82.73
	Total	**101 (43.35)**	**605 (56.97)**	**4756000 (65.03)**	**7861.16**	**62.31**
Kohima	Micro enterprise	65 (73.86)	125 (32.22)	764300 (35.50)	6114.4	59.95
	Small enterprise	17 (19.32)	88 (22.68)	282500 (13.12)	3210.23	33.99
	Medium enterprise	6 (6.82)	175 (45.10)	1106000 (51.38)	6320	79.17
	Total	**88 (37.77)**	**388 (36.53)**	**2152800 (29.43)**	**5548.45**	**61.45**
Phek	Micro enterprise	41 (93.18)	63 (91.30)	361000 (89.14)	5730.16	54.85
	Small enterprise	3 (6.82)	6 (8.70)	44000 (10.86)	7333.33	56.97
	Total	**44 (18.88)**	**69 (6.50)**	**405000 (5.54)**	**5869.57**	**55.08**
Overall	Micro enterprise	159 (68.24)	311 (29.28)	1978800 (27.05)	12445.28	60.68
	Small enterprise	64 (27.47)	401 (37.76)	2529000 (35.58)	39515.63	49.03
	Medium enterprise	10 (4.29)	350 (32.96)	2806000 (38.37)	280600	81.29
	Total	**233**	**1062**	**7313800**	**6886.82**	**61.61**

Source: same as table III.1

As represented in table III.40, in Dimapur, the total wage for 605 persons is

Rs.47,56,000 with an average wage of Rs.7861.16 per worker. Among the activities, the

expenditure on wage is highest in shops (72.05 percent), and also the average wage is

highest in the activity of shops. In Kohima, the total wage for 388 persons is Rs.21,52,800 with an average wage of Rs.5548.45 per worker. Among the activities, the wage share is highest in hotels (52.40 percent) while the average wage is highest in the activity of shops. In Phek, the total wage for 69 persons is Rs.4,05,000 with an average wage of Rs.5869.57 per worker. In Phek, the wage share, as well as the average wage is highest in shops. Among the towns, a higher wage is paid by Dimapur in all the activities.

Table III.40: Activity-wise expenditure on wages (in Rs.)

Towns	Activity	Units	Employment	Wage	Avg. Wage	Percentage to total expenditure
Dimapur	Shops	75 (74.26)	399 (65.95)	3427000 (72.05)	8588.97	69.53
	Transport	12 (11.88)	63 (10.41)	465000 (9.78)	7380.95	32.86
	Workshops	8 (7.92)	35 (5.79)	185000 (3.89)	5285.71	66.26
	Hotels	6 (5.94)	108 (17.85)	679000 (14.28)	6287.04	67.23
	Total	**101 (43.35)**	**605 (56.97)**	**4756000 (65.03)**	**7861.16**	**62.31**
Kohima	Shops	57 (64.77)	90 (23.20)	589800 (27.40)	6553.33	62.96
	Transport	11 (12.50)	30 (7.73)	141000 (6.55)	4700.00	31.41
	Workshops	12 (13.64)	82 (21.13)	294000 (13.65)	3585.37	46.47
	Hotels	8 (9.09)	186 (47.94)	1128000 (52.40)	6064.52	75.97
	Total	**88 (37.77)**	**388 (36.53)**	**2152800 (29.43)**	**5548.45**	**61.45**
Phek	Shops	31 (70.45)	39 (56.52)	274500 (67.78)	7038.46	66.74
	Transport	7 (15.91)	8 (11.59)	40000 (9.88)	5000.00	22.28
	Workshops	6 (13.64)	22 (31.88)	90500 (22.34)	4113.64	62.61
	Total	**44 (18.88)**	**69 (6.50)**	**405000 (5.54)**	**5869.57**	**55.08**
Overall	Shops	163 (69.96)	528 (49.72)	4291300 (58.67)	26326.99	68.37
	Transport	30 (12.87)	101 (9.51)	646000 (8.83)	21533.33	31.61
	Workshops	26 (11.16)	139 (13.09)	569500 (7.79)	21903.85	53.91
	Hotels	14 (6.01)	294 (27.68)	1807000 (24.71)	129071.4	72.43
	Total	**233**	**1062**	**7313800**	6886.82	**61.61**

Source: same as table III.1

II.4: Rent

Out of the total expenditure on rent, the expenditure on rent in Dimapur, Kohima and Phek is 73.41 percent, 21.73 percent and 4.86 percent respectively. The average rent in Dimapur is Rs.12,860.24, while in Kohima and Phek, it is Rs.4369.07 and Rs.1953.18 respectively.

Table III.41: Category-wise expenditure on rent (in Rs.)

Towns	Category	Units	Rent	Avg. Rent	Percentage to total expenditure
Dimapur	Micro enterprise	53 (52.48)	269588 (20.76)	5086.57	20.30
	Small enterprise	44 (43.56)	818629 (63.03)	18605.2	19.26
	Medium enterprise	4 (3.96)	210667 (16)	52666.75	10.25
	Total	**101 (43.35)**	**1298884 (73.41)**	**12860.24**	**17.02**
Kohima	Micro enterprise	65 (73.86)	261660 (68.06)	4025.54	20.52
	Small enterprise	17 (19.32)	-	-	-
	Medium enterprise	6 (6.82)	122818 (31.94)	20469.67	8.79
	Total	**88 (37.77)**	**384478 (21.73)**	**4369.07**	**10.98**
Phek	Micro enterprise	41 (93.18)	77940 (90.69)	1900.98	11.84
	Small enterprise	3 (6.82)	8000 (9.31)	2666.67	10.36
	Total	**44 (18.88)**	**85940 (4.86)**	**1953.18**	**11.69**
Overall	Micro enterprise	159 (68.24)	609188 (34.43)	3831.37	18.68
	Small enterprise	64 (27.47)	826629 (46.72)	12916.08	16.03
	Medium enterprise	10 (4.29)	333485 (18.85)	33348.5	9.7
	Total	**233**	**1769302**	**7593.57**	**14.90**

Source: same as table III.1

In Dimapur, expenditure on rent in small enterprises is higher (63.03 percent), while the average rent is higher in medium enterprises (Rs. 52666.75). In Kohima, expenditure on rent is higher in micro enterprises (68.06 percent) while the average rent is higher in medium enterprises (Rs. 20469.67). Similarly, in Phek, expenditure on rent is higher in micro enterprises (90.69 percent) while the average rent is higher in small enterprises (Rs. 2666.67). Among the towns, higher rent is paid by Dimapur in all the

categories. Looking at the percentage expenditure, in Dimapur 17.02 percent of the expenditure is on rent, in Kohima, it is 10.98 percent and in Phek, 11.69 percent of the expenditure is on rent

Table III.42: Activity-wise expenditure on rent (in Rs.)

Towns	Activity	Units	Rent	Avg. Rent	Percentage to total expenditure
Dimapur	Shops	75 (74.26)	1274696 (98.14)	16995.95	25.86
	Transport	12 (11.88)	-	-	-
	Workshops	8 (7.92)	24188 (1.86)	3023.5	8.66
	Hotels	6 (5.94)	-	-	-
	Total	**101** (43.35)	**1298884 (73.41)**	**12860.24**	**17.02**
Kohima	Shops	57 (64.77)	314024 (81.68)	5509.19	33.52
	Transport	11 (12.50)	-	-	-
	Workshops	12 (13.64)	70454 (18.32)	5871.17	11.14
	Hotels	8 (9.09)	-	-	-
	Total	**88** (37.77)	**384478 (21.73)**	**4369.07**	**10.98**
Phek	Shops	31 (70.45)	74690 (86.91)	2409.36	18.16
	Transport	7 (15.91)	-	-	-
	Workshops	6 (13.64)	11250 (13.09)	1875	7.79
	Total	**44** (18.88)	**85940 (4.86)**	**1953.12**	**11.69**
Overall	Shops	163 (69.96)	1663410 (94.02)	10204.97	26.50
	Transport	30 (12.87)	**-**	**-**	**-**
	Workshops	26 (11.16)	105892 (5.98)	4072.77	10.02
	Hotels	14 (6.01)	**-**	**-**	**-**
	Total	**233**	**1769302**	**7593.571**	**14.90**

Source: same as table III.1

Out of the total expenditure on rent which is Rs.12,98,884 in Dimapur, shops account for 98.14 percent and workshops 1.86 percent. Likewise, in Kohima, out of the total expenditure on rent which is Rs.3,84,478, shops account for 81.68 percent and workshops 18.32 percent. Similarly, in Phek, out of the total expenditure on rent which is Rs.85,940, shops account for 86.91 percent and workshops 13.09 percent. Among the

towns, the average rent of Dimapur is highest at Rs.12,860 and is higher than the overall average rent of Rs.7594 per enterprise.

II.5: Electricity

Out of the total expenditure on electricity which is Rs.6,52,412 in services sector, the percentage distribution for Dimapur, Kohima and Phek are 65.49 percent, 30.32 percent and 4.19 percent respectively (table III.43). The average expenditure on electricity in Dimapur is Rs.4230.49, while in Kohima and Phek, it is Rs.2247.99 and Rs.620.68 respectively.

Table III.43: Category-wise expenditure on electricity (in Rs.)

Towns	Category	Units	Electricity	Avg. Electricity	Percentage to total expenditure
Dimapur	Micro enterprise	53 (52.48)	87458 (20.46)	1650.15	6.59
	Small enterprise	44 (43.56)	265621 (62.17)	6028.64	6.24
	Medium enterprise	4 (3.96)	74200 (17.37)	18550.00	3.61
	Total	**101 (43.35)**	**427279 (65.49)**	**4230.49**	**5.59**
Kohima	Micro enterprise	65 (73.86)	45695 (23.10)	703.00	3.58
	Small enterprise	17 (19.32)	25128 (12.70)	1478.12	3.02
	Medium enterprise	6 (6.82)	127000 (64.20)	21166.67	9.09
	Total	**88 (37.77)**	**197823 (30.32)**	**2247.99**	**5.65**
Phek	Micro enterprise	41 (93.18)	22070 (80.81)	538.29	3.35
	Small enterprise	3 (6.82)	5240 (19.19)	1746.67	6.78
	Total	**44 (18.88)**	**27310 (4.19)**	**620.68**	**3.71**
Overall	Micro enterprise	159 (68.24)	155223 (23.79)	976.25	4.76
	Small enterprise	64 (27.47)	295989 (45.37)	4624.831	5.73
	Medium enterprise	10 (4.29)	201200 (3.84)	20120.00	5.83
	Total	**233**	**652412**	**2798.51**	**5.49**

Source: same as table III.1

In Dimapur, expenditure on electricity in small enterprises is highest with 62.17 percent, while the average expenditure on electricity is higher in medium enterprises. In

Kohima, expenditure on electricity as well as the average electricity is highest in medium enterprises. Similarly, in Phek, expenditure on electricity is highest in micro enterprises with 80.81 percent while the average electricity is higher in small enterprises. Among the towns, higher expenditure on electricity is incurred by Dimapur in micro and small categories, while in medium category, average expenditure on electricity is higher in Kohima. Looking at the percentage expenditure to total expenditure, in Dimapur and Kohima, 5.59 percent and 5.65 percent of the expenditure respectively is on electricity while in Phek, 3.71 percent of the expenditure is on electricity.

Out of the total expenditure on electricity which is Rs.4,27,279 in Dimapur, the percentage distribution of expenditure on shops, workshops and hotels is 53.08 percent, 5.73 percent and 41.19 percent respectively (table III.44). In Dimapur, expenditure on electricity in shops is highest, while the average expenditure is highest in hotels. Out of the total expenditure on electricity which is Rs.1,97,823 in Kohima, the percentage expenditure on shops, workshops and hotels is 16.65 percent, 13.27 percent and 70.08 percent respectively. In Kohima, expenditure on electricity as well as the average expenditure on electricity is highest in hotels. Similarly, out of the total expenditure on electricity which is Rs.27,310 in Phek, the percentage expenditure of electricity on shops and workshops is 71.44 percent and 28.56 percent respectively. In Phek, expenditure on electricity is higher in shops while the average expenditure is higher in workshops. Among the towns, higher expenditure on electricity is incurred by Dimapur in all the activities.

Table III.44: Activity-wise expenditure on electricity (in Rs.)

Towns	Activity	Units	Electricity	Avg. Electricity	Percentage to total expenditure
Dimapur	Shops	75 (74.26)	226779 (53.08)	3023.72	4.60
	Transport	12 (11.88)	-	-	-
	Workshops	8 (7.92)	24500 (5.73)	3062.5	8.78
	Hotels	6 (5.94)	176000 (41.19)	29333.33	17.43
	Total	**101** (43.35)	**427279 (65.49)**	**4230.49**	**5.59**
Kohima	Shops	57 (64.77)	32930 (16.65)	577.72	3.52
	Transport	11 (12.50)	-	-	-
	Workshops	12 (13.64)	26250 (13.27)	2187.50	4.15
	Hotels	8 (9.09)	138643 (70.08)	17330.38	9.34
	Total	**88** (37.77)	**197823 (30.32)**	**2247.99**	**5.65**
Phek	Shops	31 (70.45)	19510 (71.44)	629.35	4.74
	Transport	7 (15.91)	-	-	-
	Workshops	6 (13.64)	7800 (28.56)	1300.00	5.40
	Total	**44** (18.88)	**27310 (4.19)**	**620.68**	**3.71**
Overall	Shops	163 (69.96)	279219 (42.80)	1713	4.45
	Transport	30 (12.87)	-	-	-
	Workshops	26 (11.16)	58550 (8.97)	2251.92	5.54
	Hotels	14 (6.01)	314643 (48.23)	22474.50	12.61
	Total	**233**	**652412**	**2800.06**	**5.49**

Source: same as table III.1

II.6: Miscellaneous

Miscellaneous expenditure includes maintenance cost of wear and tear of machinery, vehicles, fuel, etc. Out of the total expenditure on miscellaneous which is Rs.21,35,654, expenditure on miscellaneous in Dimapur, Kohima and Phek account for 53.87 percent, 35.96 percent and 10.17 percent respectively. The average miscellaneous expenditure in Dimapur is Rs.11,391.09, while in Kohima and Phek, it is Rs.8727.89 and Rs.4934.09 respectively. In Dimapur, percentage expenditure on miscellaneous as well as average miscellaneous expenditure is highest in small enterprises. In Kohima,

expenditure on miscellaneous is highest in micro enterprises while the average miscellaneous expenditure is higher in medium enterprises. Similarly, in Phek, expenditure on miscellaneous is highest in micro enterprises while the average miscellaneous expenditure is higher in small enterprises. Among the towns, higher expenditure on miscellaneous is incurred by Dimapur in small category, Kohima in medium category and Phek in micro category. Looking at the percentage expenditure, in Dimapur, 15.07 percent of the expenditure is on miscellaneous; in Kohima, it is 21.92 percent; and in Phek, 29.32 percent of the expenditure is on miscellaneous.

Table III.45: Category- wise expenditure on miscellaneous (in Rs.)

Towns	Category	Units	Miscellaneous	Avg. Misc.	Percentage to total expenditure
Dimapur	Micro enterprise	53 (52.48)	215500 (18.73)	4066.04	16.23
	Small enterprise	44 (43.56)	865000 (75.19)	19659.09	20.35
	Medium enterprise	4 (3.96)	70000 (6.08)	17500.00	3.41
	Total	**101 (43.35)**	**1150500 (53.87)**	**11391.09**	**15.07**
Kohima	Micro enterprise	65 (73.86)	278340 (36.24)	4282.15	21.83
	Small enterprise	17 (19.32)	277714 (36.16)	16336.12	33.41
	Medium enterprise	6 (6.82)	212000 (27.60)	35333.33	15.18
	Total	**88 (37.77)**	**768054 (35.96)**	**8727.89**	**21.92**
Phek	Micro enterprise	41 (93.18)	197100 (90.79)	4807.32	29.95
	Small enterprise	3 (6.82)	20000 (9.21)	6666.67	25.89
	Total	**44 (18.88)**	**217100 (10.17)**	**4934.09**	**29.52**
Overall	Micro enterprise	159 (68.24)	690940 (32.35)	4345.54	21.19
	Small enterprise	64 (27.47)	1162714 (54.45)	18167.41	22.54
	Medium enterprise	10 (4.29)	282000 (13.20)	28200.00	8.17
	Total	**233**	**2135654**	**9165.9**	**17.99**

Source: same as table III.1

Table III.46: Activity-wise expenditure on miscellaneous (in Rs.)

Towns	Activity	Units	Miscellaneous	Avg. Misc.	Percentage to total expenditure
Dimapur	Shops	75 (74.26)	-	-	-
	Transport	12 (11.88)	950000 (82.57)	79166.67	67.14
	Workshops	8 (7.92)	45500 (3.96)	5687.5	16.30
	Hotels	6 (5.94)	155000 (13.47)	25833.33	15.35
	Total	**101** (43.35)	**1150500 (53.87)**	**11391.09**	**15.07**
Kohima	Shops	57 (64.77)	-	-	-
	Transport	11 (12.50)	307840 (40.08)	27985.45	68.59
	Workshops	12 (13.64)	242000 (31.51)	20166.67	38.25
	Hotels	8 (9.09)	218214 (28.41)	27276.75	14.70
	Total	**88** (37.77)	**768054 (35.96)**	**8727.886**	**21.92**
Phek	Shops	31 (70.45)	42600 (19.62)	1374.194	10.36
	Transport	7 (15.91)	139500 (64.26)	19928.57	77.72
	Workshops	6 (13.64)	35000 (16.12)	5833.333	24.21
	Total	**44** (18.88)	**217100 (10.17)**	**4934.091**	**29.52**
Overall	Shops	163 (69.96)	42600 (1.99)	261.35	6.79
	Transport	30 (12.87)	1397340 (65.43)	46578	68.39
	Workshops	26 (11.16)	322500 (15.10)	12403.85	30.53
	Hotels	14 (6.01)	373214 (17.48)	26658.14	14.96
	Total	**233**	**2135654**	**9165.897**	**17.99**

Source: same as table III.1

Out of the total expenditure on miscellaneous which is Rs.11,50,500 in Dimapur, expenditure on miscellaneous in transport, workshops and hotels is 82.57 percent, 3.96 percent and 13.47 percent respectively. In Dimapur, expenditure on miscellaneous among the activities as well as average miscellaneous expenditure is highest in transport. In Kohima, out of the total expenditure on miscellaneous which is Rs.7,68,054, expenditure on miscellaneous in transport, workshops and hotels is 40.08 percent, 31.51 percent and 28.41 percent respectively. In Kohima, expenditure on miscellaneous among the activities as well as average miscellaneous expenditure is highest in transport. Similarly, out of the total expenditure on miscellaneous which is Rs.2,17,100 in Phek, expenditure on miscellaneous in shops, transport and workshops is

19.62 percent, 64.26 percent and 16.12 percent respectively. In Phek, expenditure on miscellaneous among the activities as well as average miscellaneous expenditure is highest in transport. Among the towns, higher average expenditure on miscellaneous is incurred by Dimapur in transport, Kohima in workshops and hotels, and Phek in shops.

II.7: Regression Analysis

A regression analysis is carried out to find the relationships between the output (Gross Monthly Income and Net Monthly Income) and the various costs involved in the process of production in services sector.

The variables affecting total output is expressed in the form of equation as

$$Y= f(X_1, X_2,…,Xn) \qquad \text{-------------------- (i)}$$

Where,

Y= Output, X_1= Wages , X_2= Rent, X_3=Electricity, X_4= Miscellaneous

In analysing the factors determining Y_t, a multiple linear regression model has been applied, as such

$$Y_t = b0 + b1X_1 + b2X_2 + … + bn\,Xn + e^t \qquad \text{---------------------------- (ii)}$$

Where,

Y= Output,   b0= Constant

b1, b2,…,bn= Regression coefficient of wages, rent, electricity, and Miscellaneous.

$X_1, X_2, \ldots, X_n$ = Independent variables wages, rent, electricity, and Miscellaneous.

$t = (1,2,3,\ldots,233)$

e^t = Error term (representing the remaining variation in Y that cannot be explained by a linear relationship with X)

Table III.47: Regression results of GMI and items of expenditure

Variables	Overall Coefficients	Dimapur Coefficients	Kohima Coefficients	Phek Coefficients
Constant	10898.57 (0.89)	52413.72 (1.75)	3140.80 (1.01)	4864.80 (1.35)
Wages (X_1)	2.57 (13.56***)	3.42 (9.23***)	1.86 (48.11***)	1.21 (3.41**)
Rent (X_2)	-0.54 (-0.53)	-4.90 (-2.56*)	2.10 (4.71***)	2.61 (2.58*)
Electricity(X_3)	5.58 (3.63***)	5.47 (2.07*)	1.99 (4.94***)	2.45 (1.76)
Miscellaneous (X_4)	0.45 (1.41)	-0.09 (-0.17)	0.92 (7.74***)	1.55 (7.24***)
R^2	0.69	0.69	0.98	0.69
N	233	101	88	44

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

The regression analysis of GMI with cost variables in the three towns for services sector is analysed and interpreted from the table III.47. In overall analysis, all variables show expected sign, except for rent, which is having a positive effect on GMI. That is, a 10 percent increase in all the given variables will increase GMI by 25.7 percent, 55.8 percent and 4.5 percent of X_1, X_3 and X_4 respectively. In Dimapur, wages and electricity show a positive effect on GMI while rent and miscellaneous show a negative effect on GMI. Likewise, in Kohima and Phek all variables show a positive effect on GMI. As shown in the regression result, in Overall, Dimapur, Kohima and Phek, the coefficient of determination is $R^2 = 0.69$, $R^2 = 0.69$, $R^2 = 0.98$ and $R^2 = 0.69$

which implies that 69, 69, 98 and 69 percent of the variation in output is explained by the given variables in the given category. The variables have a better explanation for the dependent variable in Kohima.

Table III.48: Regression results of NMI and items of expenditure

Variables	Overall Coefficients	Dimapur Coefficients	Kohima Coefficients	Phek Coefficients
Constant	10899.64 (0.89)	52414.82 (1.75)	3142.05 (1.01)	4866.1 (1.35)
Wages (X_1)	1.57 (8.28***)	2.42 (6.54***)	0.86 (22.22***)	0.21 (0.60)
Rent (X_2)	-1.54 (-1.51)	-5.90 (-3.08**)	1.10 (2.47*)	1.61 (1.59)
Electricity(X_3)	4.58 (2.98**)	4.45 (1.69)	0.99 (2.46*)	1.45 (1.04)
Miscellaneous (X_4)	-0.55 (-1.75)	-1.09 (-2.13*)	-0.08 (-0.63)	0.55 (2.58*)
R^2	0.42	0.47	0.91	0.21
N	233	101	88	44

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

The regression equation with respect to NMI shows that wages and electricity have a positive effect on the dependent variable while rent and miscellaneous have a negative effect on the dependent variable. This implies that a 10 percent increase in the variables, it is expected to increase the dependent variable by 15.7 percent (wages) and 45.8 percent (electricity) while it will decrease the dependent variable by 15.4 percent (rent) and 5.5 percent (miscellaneous). Likewise, in Dimapur, wages and electricity have a positive effect on the dependent variable while rent and miscellaneous have a negative effect on the dependent variable. In Kohima, wages, rent and electricity reveal a positive effect on the dependent variable while miscellaneous reveal negative effect on the dependent variable. In Phek, all the variables show a positive effect on the dependent variable. The coefficient of determination is better explained by the given

variables in Kohima compared with Dimapur and Phek for the variation in the dependent variable.

In the category of micro enterprise, all variables show expected sign which is having a positive effect on GMI. That is, a 10 percent increase in all the given variables will increase GMI by 12.8 percent, 27 percent, 4.8 percent and 10.4 percent of X_1, X_2, X_3 and X_4 respectively. In Dimapur, all variables, except electricity, show a positive effect on GMI. Likewise, in Kohima and Phek, all variables represent a positive effect on GMI. As shown in the regression result, in overall, Dimapur, Kohima and Phek, the coefficient of determination is $R^2 = 0.71$, $R^2 = 0.77$, $R^2 = 0.62$ and $R^2 = 0.77$ respectively which implies that 29 percent, 23 percent, 38 percent and 23 percent of the variation in the dependent variable is not explained by the given independent variables.

Table III.49: Regression results of GMI and items of expenditure in micro enterprise

	Overall	Dimapur	Kohima	Phek
Variables	Coefficients	Coefficients	Coefficients	Coefficients
Constant	7531.50 (3.75)	6107.59 (1.45)	12394.57 (4.02)	6767.20 (2.64)
Wages (X_1)	1.28 (8.45***)	1.15 (4.43***)	1.41 (5.77***)	0.99 (3.88***)
Rent (X_2)	2.70 (9.25***)	3.74 (7.33***)	1.29 (2.96**)	2.17 (3.03**)
Electricity(X_3)	0.48 (0.80)	-0.38 (-0.43)	2.05 (1.10)	1.36 (1.32)
Miscellaneous (X_4)	1.04 (7.88***)	1.27 (4.28***)	0.64 (3.55**)	1.45 (9.58***)
R^2	0.71	0.77	0.62	0.77
N	159	53	65	41

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

Similarly, regression equation with respect to NMI shows that factors such as wages, rent and miscellaneous exhibit a positive impact on NMI while there is a negative relation of electricity on NMI. This result implies that a 10 percent increase in the variable input will have a positive effect on NMI by 2.8 percent (wages), 17 percent

(rent), 0.4 percent (miscellaneous) and negative impact on NMI by 5.2 percent (electricity). Alike in Dimapur, factors such as wages, rent and miscellaneous depict a positive impact on NMI while there is a negative relation between electricity and NMI. In Kohima, factors like wages, rent and electricity reveal a positive effect on NMI, while miscellaneous reveal a negative effect on NMI. Again in Phek, factors like rent, electricity and miscellaneous show a positive effect on NMI, while wages show a negative effect on NMI.

Table III.50: Regression results of NMI and items of expenditure in micro enterprise

	Overall	Dimapur	Kohima	Phek
Variables	Coefficients	Coefficients	Coefficients	Coefficients
Constant	7532.7 (3.76)	6108.72 (1.45)	12395.97 (4.02)	6768.589 (2.64)
Wages (X_1)	0.28 (1.85)	0.15 (0.57)	0.41 (1.67)	-0.01 (-0.04)
Rent (X_2)	1.70 (5.82***)	2.74 (5.37***)	0.29 (0.66)	1.17 (1.64)
Electricity(X_3)	-0.52 (-0.86)	-1.38 (-1.58)	1.05 (0.56)	0.36 (0.35)
Miscellaneous (X_4)	0.04 (0.31)	0.27 (0.92)	-0.36 (-1.99)	0.45 (2.99**)
R^2	0.27	0.45	0.14	0.21
N	159	53	65	41

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
(iii)*, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level

The regression result shows that all variables have a positive effect on GMI with the coefficient of determination at $R^2 = 0.83$ indicating that 83 percent of the variation in GMI is explained by variables X_1, X_2, X_3 and X_4 (table III.51). In Dimapur, except electricity, other variables show a positive effect on GMI with the coefficient of determination at $R^2 = 0.80$ indicating that 80 percent of the variation in GMI is explained by variables X_1, X_2, X_3 and X_4. In Kohima, regression result show that all variables have a positive effect on GMI with the coefficient of determination at $R^2 =$

0.93 indicating that 93 percent of the variation in GMI is explained by variables X_1, X_2,

X_3 and X_4.

Table III.51: Regression results of GMI and items of expenditure in small enterprise

Variables	Overall Coefficients	Dimapur Coefficients	Kohima Coefficients
Constant	22165.05 (1.78)	42391.6 (1.93)	-3435.49 (-0.34)
Wages (X_1)	1.70 (8.69***)	1.69 (6.92***)	1.50 (4.54**)
Rent (X_2)	2.96 (4.71***)	2.42 (2.66*)	3.04 (4.32**)
Electricity(X_3)	0.46 (0.58)	-0.02 (-0.02)	7.64 (2.81*)
Miscellaneous (X_4)	0.69 (4.48***)	0.63 (3.19**)	0.91 (6.56***)
R2	0.83	0.80	0.93
N	64	44	17

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

In small enterprise, regression is done only with Dimapur and Kohima because

in Phek the number of observation is too small to analyse to get an expected result.

Table III.52: Regression results of NMI and items of expenditure in small enterprise

Variables	Overall Coefficients	Dimapur Coefficients	Kohima Coefficients
Constant	22166.25 (1.78)	42392.85 (1.93)	-3434.18 (-0.34)
Wages (X_1)	0.70 (3.59**)	0.69 (2.81**)	0.50 (1.52)
Rent (X_2)	1.96 (3.12**)	1.42 (1.56)	2.04 (2.90*)
Electricity(X_3)	-0.54 (-0.69)	-1.02 (-1.03)	6.64 (2.44*)
Miscellaneous (X_4)	-0.31 (-2.06*)	-0.37 (-1.92)	-0.09 (-0.67)
R^2	0.41	0.33	0.74
N	64	44	17

Note: (i) Figure in parenthesis indicates t-value, (ii) N= No. of observations
*(iii) *, ** and *** sign indicates 10 percent, 5 percent and 1 percent significance level*

The regression result show that wages and rent have positive effect on NMI

while electricity and miscellaneous have negative effect on NMI with the coefficient of

determination at $R^2 = 0.41$ indicating that 41 percent of the variation in NMI is explained by variables X_1, X_2, X_3 and X_4. In Dimapur, wages and rent have positive effect on NMI while electricity and miscellaneous have negative effect on NMI with the coefficient of determination at $R^2 = 0.33$ indicating that 33 percent of the variation in NMI is explained by variables X_1, X_2, X_3 and X_4. In Kohima, wages, rent and electricity have positive effect on NMI while and miscellaneous have negative effect on NMI with the coefficient of determination at $R^2 = 0.74$ indicating that 74 percent of the variation in NMI is explained by variables X_1, X_2, X_3 and X_4.

II.8: Cobb-Douglas Production Function

In services sector, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.58 and 0.33 respectively. In other words, if labour input is increased by 10 percent, output will increase by an estimated 5.8 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase output by 3.3 percent. This shows that there is decreasing returns to scale since $ß_1 + ß_2 = 0.91$ which is less than 1 and given the two inputs, additional labour input will be preferred to capital input because output elasticity of labour is higher than the output elasticity of capital. The R^2 value 0.85 means that 85 percent of the variation in the output is explained by labour and capital. Since services sector is operating under decreasing return to scale, hypothesis 2 is accepted and since labour productivity is higher than capital productivity, hypothesis 3 is also accepted.

As shown in table III.53, the F-statistic is obtained as 0.00134. This estimated F-value is lower than the critical F-value of 2.99. The estimated F-value in both labour and capital is lower than the critical F-value of 3.84.

Table III.53: Cobb-Douglas production function and covariance (Category-wise)

		Category		
Estimated Cobb-Douglas Production Function and Covariance				
Variable	Overall	Micro	Small	Medium
Coefficient	2.167762	3.544116	4.288651	1.612502
	(9.06)	(9.22)	(6.87)	(0.85)
Labour	0.584802	0.466146	0.416574	0.791224
	(18.91)	(11.16)	(6.17)	(3.19)
Capital	0.338868	0.29697	0.310979	0.190295
	(12.98)	(11.31)	(4.63)	(0.67)
Labour x labour	1.121657	0.443501	0.801458	1.414916
Capital x capital	1.575032	1.123174	0.810033	1.089385
Labour x capital	0.825573	0.200272	0.473673	0.995078
R^2	0.85	0.69	0.70	0.85
Adj. R^2	0.853437	0.689161	0.690194	0.806122
e*e	4014.689	5244.041	2638.453	263.5481
σ_u	17.45517	33.61565	43.25333	37.64973
N	233	159	64	10
F test				
Overall	0.00134	0.02852	0.02901	7.60E-05
	(2.99[#])	(2.99[#])	(3.15[#])	(4.74[#])
Labour	0.15369	0.64261	0.42471	0.030806
	(3.84[#])	(3.84[#])	(4.001[#])	(5.32[#])
Capital	0.27752	0.44005	0.58609	0.601828
	(3.84[#])	(3.84[#])	(4.001[#])	(5.32[#])

*Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value
(iii) N= No. of observations*

In micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.46 and 0.29 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.9 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.69$ indicates 69 percent of the variation in the output is explained by labour and capital.

In small enterprise, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.41 and 0.31 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.1 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 3.1 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.70$ indicates 70 percent of the variation in the output is explained by labour and capital.

Likewise, in medium enterprise, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.79 and 0.19 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 7.9 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 1.9 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.85$ indicates that 85 percent of the variation in the output is explained by labour and capital. The elasticity of labour in medium enterprise is higher than micro enterprise and small enterprise and elasticity of capital in micro enterprise is higher than the small enterprise and medium enterprise.

The calculated F value in micro enterprise, small enterprise and medium enterprise is lower than the critical F-value and also the calculated F values for labour elasticity and capital elasticity is lower than the critical F values.

In services sector, the output elasticity of labour is higher than the output elasticity of capital. Thus, labour plays a more important role in the additional output and hence, we may conclude that services sector is labour intensive and the hypothesis 3 is accepted.

As represented in table III.54, the output elasticity of labour (β_1) and capital (β_2) in shops is 0.56 and 0.40 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 5.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 4 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.86$ indicates 86 percent of the variation in the output is explained by labour and capital. In transport, the output elasticity of labour (β_1) and capital (β_2) is 0.30 and 0.54 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 5.4 percent of output indicating a decreasing return to scale. The value of $R^2 = 0.94$ indicates 94 percent of the variation in the output is explained by labour and capital. Likewise, in workshops, the output elasticity of labour (β_1) and capital (β_2) is 0.49 and 0.45 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.9 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 4.5 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.96$ indicates that 96 percent of the variation in the output is explained by labour and capital. Similarly in hotels, the output elasticity of labour (β_1) and capital (β_2) is 0.86 and 0.18 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 8.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 1.8 percent of output indicating increasing returns to scale.

Table III.54: Cobb-Douglas production function and covariance (Activity-wise)

Estimated Cobb-Douglas Production Function and Covariance					
Variable	Overall	Activity			
		Shops	Transport	Workshops	Hotels
Coefficient	2.167762 (9.06)	1.908909 (6.57)	2.52567 (6.09)	1.500269 (3.53)	0.669587 (0.56)
Labour	0.584802 (18.91)	0.564301 (14.62)	0.309916 (4.78)	0.496213 (8.97)	0.86447 (5.43)
Capital	0.338868 (12.98)	0.400568 (12.34)	0.541084 (7.87)	0.4567 (10.31)	0.184493 (1.17)
Labour x labour	1.121657	3.771749	0.955359	0.370089	1.036858
Capital x capital	1.575032	0.033854	0.846793	0.578253	1.052674
Labour x capital	0.825573	0.004082	0.727373	0.296025	0.794716
R^2	0.85	0.86	0.94	0.96	0.90
Adj. R^2	0.853437	0.85732	0.935249	0.953674	0.8785
e*e	4014.689	2668.343	215.9879	127.5345	217.9471
σ_u	17.45517	16.67714	7.999554	5.544977	19.81337
N	233	163	30	26	14
F test					
Overall	0.00134 ($2.99^{\#}$)	0.00032 ($2.99^{\#}$)	0.00682 ($3.35^{\#}$)	0.00144 ($3.42^{\#}$	0.00065 ($3.98^{\#}$
Labour	0.15369 ($3.84^{\#}$)	0.05033 ($3.84^{\#}$)	0.49847 ($4.20^{\#}$)	0.68578 ($4.26^{\#}$)	0.01772 ($4.75^{\#}$)
Capital	0.27752 ($3.84^{\#}$	10.6138 ($3.84^{\#}$)	0.24871 ($4.20^{\#}$)	0.51046 ($4.26^{\#}$)	0.63177 ($4.75^{\#}$)

Note: (i) Figure in parenthesis indicates t-value, (ii) $^{\#}$ sign indicates critical F-value (iii) N= No. of observations

The value of $R^2 = 0.90$ indicates that 90 percent of the variation in the output is explained by labour and capital. The elasticity of labour is higher in hotels indicating that hotel is more labour intensive and the elasticity of capital is higher in transport indicating that transport is capital intensive.

It is also observed from the table III.54, the output elasticity of labour is higher than the output elasticity of capital in all activity, except in transport where the elasticity of capital is higher, indicating that labour can be more productively employed in services sector.

Table III.55: Cobb-Douglas production function and covariance in Dimapur (Category-wise)

Variable	Overall	Category		
		Micro	Small	Medium
Estimated Cobb-Douglas Production Function and Covariance				
Coefficient	1.886913 (4.89)	3.243405 (5.62)	5.540496 (6.50)	16.31653 (1.71)
Labour	0.578141 (11.31)	0.454001 (7.01)	0.354675 (4.31)	-1.63911 (-0.98)
Capital	0.380943 (8.25)	0.346697 (8.52)	0.261489 (2.99)	1.685418 (1.18)
Labour x labour	1.20316	0.421252	0.684262	0.173662
Capital x capital	1.473333	1.067091	0.605011	0.240156
Labour x capital	0.911094	0.252178	0.346345	0.186283
R^2	0.86	0.80	0.59	0.60
Adj. R^2	0.858441	0.787083	0.566533	0.218
e*e	1809.003	1210.173	2611.062	0.406001
σ_u	18.45922	22.83346	63.68444	0.406001
N	101	53	44	4
F test				
Overall	0.000372 (3.15[#])	0.01993 (5.79[#])	0.007434 (3.23[#])	1.1566 (199.50[#])
Labour	0.147915 (4.001[#])	1.71664 (5.99[#])	0.6086 (4.08[#])	40.1061 (18.51[#])
Capital	0.260112 (4.001[#])	1.7772 (5.99[#])	0.90147 (4.08[#])	1.95622 (18.51[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

In Dimapur (table III.55), the output elasticity of labour (β_1) and capital (β_2) is 0.57 and 0.38 respectively. In other words, if labour input is increased by 10 percent, output will increase by an estimated 5.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 3.3 percent of output. This result shows that there is decreasing returns to scale since $\beta_1 + \beta_2 = 0.95$ is less than 1 and given the two inputs, additional labour input will be preferred to capital input because output elasticity of labour is higher than the output elasticity of capital.

The R^2 value 0.86 means that 86 percent of the variation in the output is explained by labour and capital.

The F-statistic is obtained as 0.0003 and since the estimated F-value is lower than the critical F-value of 3.15. The estimated F-value in both labour and capital is lower than the critical F-value of 4.001.

In micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.45 and 0.34 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.5 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase output by 3.4 percent indicating a decreasing returns to scale. The value of $R^2 = 0.80$ indicates 80 percent of the variation in the output is explained by labour and capital.

In small enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.35 and 0.26 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3.5 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.6 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.59$ indicates that 59 percent of the variation in the output is explained by labour and capital.

Likewise, in medium enterprise, the output elasticity of labour (β_1) and capital (β_2) is -1.63 and 1.68 respectively which indicates that if labour input is increased by 10 percent, output will decrease by 1.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 1.6 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.60$ indicates that 60 percent of the variation in the output is explained by labour and capital. The elasticity of labour

in micro enterprise is higher than small enterprise and medium enterprise and elasticity of capital in medium enterprise is higher than the enterprise micro enterprise and small enterprise.

As shown in table III.55, the calculated F value in micro enterprise, small enterprise and medium enterprise is lower than the critical F-value and also the calculated F values for labour elasticity and capital elasticity is lower than the critical F values.

In services sector, the output elasticity of labour is higher than the output elasticity of capital. Thus, labour plays a more important role in the additional output and hence, we may conclude that services sector is labour intensive.

The output elasticity of labour ($ß_1$) and capital ($ß_2$) in shops is 0.47 and 0.48 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 4.8 percent of output indicating a decreasing returns to scale, and the output elasticity of capital is slightly higher than the output elasticity of labour. The value $R^2 = 0.88$ indicates 88 percent of the variation in the output is explained by labour and capital (table III.56).

In transport, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.33 and 0.58 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3.3 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 5.8 percent of output indicating a decreasing returns to scale and the output elasticity of capital is higher than the output elasticity of labour. The value $R^2 = 0.99$ indicates 99 percent of the variation in the output is explained by labour and capital.

Table III.56: Cobb-Douglas production function and covariance in Dimapur (Activity-wise)

Estimated Cobb-Douglas Production Function and Covariance					
Variable	Overall	Activity			
		Shops	Transport	Workshops	Hotels
Coefficient	1.886913 (4.89)	2.017536 (4.78)	1.786588 (6.42)	2.107826 (13.53)	-3.46789 (-1.54)
Labour	0.578141 (11.31)	0.474043 (8.34)	0.330731 (4.99)	0.63714 (19.44)	1.394988 (4.97)
Capital	0.380943 (8.25)	0.488492 (9.45)	0.586087 (8.45)	0.251425 (6.50)	0.019017 (0.05)
Labour x labour	1.20316	1.14383	1.427136	0.540919	0.665091
Capital x capital	1.473333	1.383017	1.301194	0.388388	0.402832
Labour x capital	0.911094	0.868017	1.263457	0.412074	0.421563
R^2	0.86	0.88	0.99	0.99	0.96
Adj. R^2	0.858441	0.87311	0.991219	0.997931	0.935518
e*e	1809.003	1195.814	10.86254	1.352469	35.8674
σ_u	18.45922	16.60853	1.206949	0.270494	11.9558
N	101	75	12	8	6
F test					
Overall	0.000372 (3.15[#])	0.000329 (3.15[#])	0.001317 (4.26[#])	0.007082 (5.79[#])	0.218649 (9.55[#])
Labour	0.147915 (4.001[#])	0.241846 (4.001[#])`	0.31386 (4.96[#])	0.243414 (5.99[#])	0.218649 (7.71[#])
Capital	0.260112 (4.001[#])	0.189181 (4.001[#])	0.13167 (4.96[#])	1.442795 (5.99[#])	2.388905 (7.71[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

Likewise, in workshops, the output elasticity of labour (β_1) and capital (β_2) is 0.63 and 0.25 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 6.3 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.5 percent of output indicating a decreasing returns to scale. The value $R^2 = 0.99$ indicates that 99 percent of the variation in the output is explained by labour and capital.

Similarly, in hotels, the output elasticity of labour (β_1) and capital (β_2) is 1.39 and 0.01 respectively which indicates that if labour input is increased by 10 percent,

output will increase by an estimated 13.9 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 0.1 percent of output indicating increasing returns to scale. The value $R^2 = 0.96$ indicates that 96 percent of the variation in the output is explained by labour and capital. The elasticity of labour is higher in hotels indicating that hotel is more labour intensive and the elasticity of capital is higher in transport indicating that transport is capital intensive.

It is also observed that the output elasticity of labour is higher than the output elasticity of capital in workshops and hotels indicating that labour can be more productively substituted for capital, and in shops and transport, elasticity of capital is higher than output elasticity of labour indicating that capital can be more productively substituted for labour. It is found that the calculated F value in all activities is lower than their corresponding critical F-value.

As represented in table III.57, in Kohima, the output elasticity of labour (β_1) and capital (β_2) is 0.57 and 0.24 respectively. In other words, if labour input is increased by 10 percent, output will increase by an estimated 5.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase output by 2.4 percent. This result shows that there is decreasing returns to scale since β_1+ β_2=0.81 is less than 1 and given the two inputs, additional labour input will be preferred to capital input because output elasticity of labour is higher than the output elasticity of capital. The R^2 value is 0.88 which means that 88 percent of the variation in the output is explained by labour and capital.

Table III.57: Cobb-Douglas production function and covariance in Kohima (Category-wise)

Estimated Cobb-Douglas Production Function and Covariance				
Variable	Overall	Category		
		Micro	Small	Medium
Coefficient	3.093571 (7.88)	4.179066 (6.31)	4.078677 (3.83)	2.793469 (2.28)
Labour	0.576006 (12.70)	0.49897 (7.48)	0.401441 (3.56)	0.618945 (3.96)
Capital	0.243142 (6.18)	0.194312 (4.16)	0.322238 (3.38)	0.247057 (1.55)
Labour x labour	0.982951	0.477802	0.664054	1.427053
Capital x capital	1.305801	0.97384	0.9285	1.37222
Labour x capital	0.572918	0.125398	0.359118	1.053643
R^2	0.82	0.59	0.76	0.95
Adj. R^2	0.810825	0.572314	0.72647	0.924316
e*e	1857.08	2902.932	503.7817	42.51934
σ_u	21.848	46.82149	35.98441	14.17311
N	88	65	17	6
F test				
Overall	0.009523 (3.15[#])	0.05526 (3.15[#])	0.176436 (3.74[#])	0.152848 (9.55[#])
Labour	0.182889 (4.001[#])	0.525388 (4.001[#])	0.539523 (4.54[#])	0.10175 (7.71[#])
Capital	0.438684 (4.001[#])	0.66657 (4.001[#])	0.494735 (4.54[#])	0.413143 (7.71[#])

Note: (i) Figure in parenthesis indicates t-value, (i)[#] sign indicates critical F-value (iii) N= No. of observations

As shown in the above table, the F-statistic is obtained as 0.0009. This estimated F-value is lower than the critical F-value of 3.15. The estimated F-value in both labour and capital is also lower than the critical F-value of 4.001.

In micro enterprise (table III.57), the output elasticity of labour (β_1) and capital (β_2) is 0.49 and 0.19 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.9 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 1.9 percent of

output indicating a decreasing returns to scale. The value of $R^2 = 0.59$ indicates 59 percent of the variation in the output is explained by labour and capital.

In small enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.40 and 0.32 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3.2 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 3.2 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.76$ indicates 76 percent of the variation in the output is explained by labour and capital.

Likewise, in medium enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.61 and 0.24 respectively which indicates that if labour input is increased by 10 percent, output will decrease by 6.1 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.4 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.95$ indicates that 95 percent of the variation in the output is explained by labour and capital. The elasticity of labour in medium enterprise is higher than micro enterprise and small enterprise and elasticity of capital in small enterprise is higher than the enterprise micro enterprise and medium enterprise.

As shown in table III.57, the calculated F value in micro enterprise, small enterprise and medium enterprise is lower than the critical F-value and also the calculated F values for labour elasticity and capital elasticity is lower than the critical F values.

The output elasticity of labour (β_1) and capital (β_2) in shops is 0.57 and 0.29 respectively (table III.58) which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.9 percent of output indicating a decreasing returns to scale. The value $R^2 = 0.63$ indicates 63 percent of the variation in the output is explained by labour and capital. In transport, the output elasticity of labour (β_1) and capital (β_2) is 0.39 and 0.38 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3.9 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 3.8 percent of output indicating a decreasing return to scale. The value $R^2 = 0.95$ indicates 95 percent of the variation in the output is explained by labour and capital. Likewise in workshops, the output elasticity of labour (β_1) and capital (β_2) is 0.42 and 0.53 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 4.2 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 5.3 percent of output indicating a decreasing returns to scale, and the output elasticity of capital is slightly higher than the output elasticity of labour. The value $R^2 = 0.96$ indicates that 96 percent of the variation in the output is explained by labour and capital.

Table III.58: Cobb-Douglas production function and covariance in Kohima (Activity-wise)

Estimated Cobb-Douglas Production Function and Covariance					
		Activity			
Variable	Overall	Shops	Transport	Workshops	Hotels
Coefficient	3.093571 (7.88)	2.66899 (3.28)	3.215578 (5.21)	1.427401 (1.88)	2.375842 (2.64)
Labour	0.576006 (12.70)	0.57861 (7.85)	0.396596 (5.8 2)	0.420965 (4.69)	0.640846 (4.92)
Capital	0.243142 (6.18)	0.297981 (4.89)	0.38583 (6.04)	0.536254 (8.46)	0.260431 (2.04)
Labour x labour	0.982951	0.486573	0.42751	0.29737	1.315184
Capital x capital	1.305801	0.711011	0.774447	0.597275	1.371337
Labour x capital	0.572918	0.036281	0.172949	0.232787	1.065394
R^2	0.82	0.63	0.95	0.96	0.96
Adj. R^2	0.810825	0.612598	0.936182	0.946815	0.943713
e*e	1857.08	2295.875	64.73937	62.70233	47.96029
σ_u	21.848	42.5162	8.092421	6.966926	9.592059
N	88	57	11	12	8
F test					
Overall	0.009523 (3.15[#])	0.011991 (3.23[#])	0.030383 (4.46[#])	0.001346 (4.26[#])	0.002023 (5.79[#])
Labour	0.182889 (4.001[#])	0.364939 (4.08[#])	0.851668 (5.12[#])	1.12748 (9 .96[#])	0.098079 (5.99[#])
Capital	0.438684 (4.001[#])	0.69314 (4.08[#])	0.487064 (5.12[#])	0.36006 (9.96[#])	0.398853 (5.99[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

Similarly in hotels, the output elasticity of labour (β_1) and capital (β_2) is 0.64 and 0.26 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 6.4 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.6 percent of output indicating decreasing returns to scale. The value $R^2 = 0.96$ indicates that 96 percent of the variation in the output is explained by labour and capital. The elasticity of labour is

higher in hotels indicating that hotel is more labour intensive and the elasticity of capital is higher in transport indicating that transport is capital intensive.

It is also observed from the table that the output elasticity of labour is higher than the output elasticity of capital in shops and transport and hotels indicating that labour can be more productively substituted for capital, and the elasticity of capital is higher than output elasticity of labour in workshops indicating that capital can be more productively substituted for labour.

As shown in table III.58 the calculated F value in all activities is lower than the critical F-value. The calculated F value for labour elasticity and capital elasticity is also lower than the critical F values.

In Phek, the output elasticity of labour (β_1) and capital (β_2) is 0.37 and 0.36 respectively. In other words, if labour input is increased by 10 percent, output will increase by an estimated 3.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 3.6 percent of output. This result shows that there is decreasing returns to scale since $\beta_1 + \beta_2 = 0.73$ is less than 1 and given the two inputs, additional labour input will be preferred to capital input because output elasticity of labour is slightly higher than the output elasticity of capital. The R^2 value is 0.70 which means that 70 percent of the variation in the output is explained by labour and capital. Since services sector in Phek is operating under decreasing return to scale, hypothesis 2 is accepted and since labour productivity is higher than capital productivity, hypothesis 3 is also accepted.

Table III.59: Cobb-Douglas production function and covariance in Phek (Category-wise)

Estimated Cobb-Douglas Production Function and Covariance		
Variable	Overall	Category
		Micro
Coefficient	3.728732 (4.46)	4.243712 (5.24)
Labour	0.377931 (4.02)	0.328268 (3.65)
Capital	0.361981(7.59)	0.348488(7.89)
Labour x labour	0.323933	0.308012
Capital x capital	1.260291	1.278701
Labour x capital	0.162631	0.13511
R2	0.70	0.71
Adj. R2	0.685031	0.692759
e*e	1364.228	1216.931
σu	33.27385	32.02451
N	44	41
F test		
Overall	0.035426 (3.23[#])	0.056268 (3.32[#])
Labour	1.194597 (4.08[#])	1.464955 (4.17[#])
Capital	0.322995 (4.08[#])	0.331952 (4.17[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

The calculated F-statistic (0.035) is lower than the critical F-value of 3.23. Likewise, the estimated F-value in both labour and capital is lower than the critical F-value of 4.08.

In micro enterprise, the output elasticity of labour ($ß_1$) and capital ($ß_2$) is 0.37 and 0.36 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 3.7 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 3.6 percent of output indicating a decreasing returns to scale. The value of $R^2 = 0.70$ indicates 70 percent of the variation in the output is explained by labour and capital.

As shown in the table III.59, the calculated F value in micro enterprise, small enterprise and medium enterprise is lower than the critical F-value and also the

calculated F values for labour elasticity and capital elasticity is lower than the critical F values.

Table III.60: Cobb-Douglas production function and covariance in Phek (Activity-wise)

Estimated Cobb-Douglas Production Function and Covariance				
Variable	Overall	Activity		
		Shops	Transport	Workshops
Coefficient	3.728732	2.551513	-1.59938	0.251949
	(4.46)	(2.58)	(-0.57)	(0.35)
Labour	0.377931	0.588428	0.545789	0.536313
	(4.02)	(4.63)	(2.31)	(10.13)
Capital	0.361981	0.275803	0.776278	0.544121
	(7.59)	(3.89)	(3.57)	(8.74)
Labour x labour	0.323933	0.29691	0.13828	0.161222
Capital x capital	1.260291	0.952854	0.163768	0.116605
Labour x capital	0.162631	0.261899	0.012988	0.016657
R2	0.70	0.72	0.83	0.99
Adj. R2	0.685031	0.699261	0.746108	0.97579
e*e	1364.228	871.1547	135.8519	9.243751
σu	33.27385	31.11267	33.96298	3.08125
N	44	31	7	6
F test				
Overall	0.035426	0.010393	0.316218	0.020793
	(3.23[#])	(3.34[#])	(6.94[#])	(9.55[#])
Labour	1.194597	0.570514	1.49195	1.333596
	(4.08[#])	(4.18[#])	(6.61[#])	(7.71[#])
Capital	0.322995	0.550411	0.305625	1.7823
	(4.08[#])	(4.18[#])	(6.61[#])	(7.71[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

The output elasticity of labour ($ß_1$) and capital ($ß_2$) in shops is 0.58 and 0.27 respectively (table III.60) which indicates that if labour input is increased by 10 percent, output will increase by an estimated 5.8 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 2.7 percent of output indicating a decreasing returns to scale. The value $R^2 = 0.72$ indicates 72 percent of the variation in the output is explained by labour and capital.

In transport, the output elasticity of labour (β_1) and capital (β_2) is 0.54 and 0.77 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 5.4 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 7.7 percent of output indicating increasing returns to scale and the output elasticity of capital is higher than labour. The value $R^2 = 0.83$ indicates 83 percent of the variation in the output is explained by labour and capital.

Likewise, in workshops, the output elasticity of labour (β_1) and capital (β_2) is 0.53 and 0.54 respectively which indicates that if labour input is increased by 10 percent, output will increase by an estimated 5.3 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase 5.4 percent of output indicating increasing returns to scale, and the output elasticity of capital is slightly higher than the output elasticity of labour. The value $R^2 = 0.99$ indicates that 99 percent of the variation in the output is explained by labour and capital. The elasticity of labour is slightly higher in shops indicating that shops is slightly more labour intensive and the elasticity of capital is higher in transport indicating that transport is capital intensive.

It is also observed that the output elasticity of labour is higher than the output elasticity of capital in shops indicating that labour can be more productively substituted for capital, and the elasticity of capital is higher than output elasticity of labour in transport and workshops indicating that capital can be more productively substituted for labour.

As shown in table III.60, the calculated F value in all activities is lower than the critical F-value. The calculated F value for labour elasticity and capital elasticity is also lower than the critical F values.

Taking manufacturing sector and services sector together, the results are shown in the table III.61 indicating that MSMEs is operating under decreasing to return to scale because ß1+ ß2 is less than 1. Therefore, hypothesis 2 is accepted. It is also found that labour elasticity at 0.50 is slightly higher than the elasticity of capital at 0.41. Therefore, hypothesis 2 is also accepted. The value of R^2 is 0.88 indicating that 88 percent of the total variation in output is explained by the additional inputs of labour and capital.

Table III.61: Cobb-Douglas production function and covariance in MSMEs

Estimated Cobb-Douglas Production Function and Covariance			
Variable	Overall	Micro	Small	Medium
coefficient	2.169699 (11.14)	2.494718 (3.24)	3.687442 (8.95)	1.774388 (1.01)
Labour	0.506938 (21.16)	0.503219 (5.75)	0.387725 (7.12)	0.723719 (4.34)
Capital	0.418549 (25.72)	0.376862 (9.34)	0.400191 (10.45)	0.251885 (1.14)
Labour x labour	1.214241	0.490208	1.075094	1.734945
Capital x capital	2.63124	2.309341	2.172823	0.990352
Labour x capital	0.990231	0.340935	1.06616	0.905624
R^2	0.89	0.44	0.87	0.87
Adj. R^2	0.886215	0.432001	0.863259	0.832094
N	318	225	82	11
F test			
Overall	0.000953 (3.07[#])	0.004131 (3.07[#])	0.00836 (3.15[#])	0.000131 (4.46[#])
Labour	0.200216 3.92[#])	0.886086 (3.92[#])	0.348696 (4.001[#])	0.043996 (5.12[#])
Capital	0.00836 (3.92[#])	0.168144 (3.92[#])	0.165578 (4.001[#])	0.565128 (5.12[#])

Note: (i) Figure in parenthesis indicates t-value, (ii) [#] sign indicates critical F-value (iii) N= No. of observations

In micro, small and medium enterprises, the elasticity shows a decreasing return to scale. Again in micro and medium enterprises, the elasticity of labour is higher than the elasticity of capital, whereas, in small enterprises, the elasticity of capital is higher than the elasticity of labour. The value of R^2 is lowest in micro enterprises. Since elasticity of labour and capital is less than one, hypothesis 2 is accepted.

CHAPTER IV

EMPLOYMENT AND INCOME

MSMEs are considered as the driving force of growth and world-over, developed and developing economies are putting strategic reform and policies to develop MSMEs. Its pmportance lies mainly in employment generation and income generation thereby bringing about economic development. It is also credited with bringing about equitable regional development because of its ability to adapt to different economic circumstances and low capital requirements. Mukherji (2014) while emphasizing the growth and employment potential of small-scale enterprises in India pointed out that there is a positive and phenomenal growth in the SSI and MSME in terms of working units along with employment opportunities. It is also possible to make a significant shift in workforce from agriculture to SSI sector through the promotion of MSMEs. Pujar (2014) also showed that MSMEs play a substantial role in employment generation and bring forth entrepreneurship at grass root level.

In this chapter a detailed analysis is done with respect to MSMEs and its contribution to employment and income in the economy.

I: Manufacturing sector and employment

Manufacturing sector employ 511 persons, out of which 364 (71.23 percent) are males and 147 (28.77 percent) females. A further break up shows that under micro enterprises 158 persons are employed, out of which 104 (65.82 percent) are males and 54 (34.18 percent) females. Under the small enterprise 349 persons are employed, out of which 260 (74.50 percent) are males and 89 (25.50 percent) females and in medium

enterprises, 4 persons are employed, out of which 2 (50 percent) are males and 2 (50 percent) females (appendix IV.1).

Town-wise, category-wise and employment: Out of the total employment in manufacturing sector (appendix IV.1), Dimapur alone accounts for 65.95 percent of which 71.81 percent are males and 28.19 percent females, with an average employment of 8.64 persons per unit, Kohima accounts for 24.46 percent of which 68 percent are males and 32 percent females representing an average employment of 3.79 persons and Phek accounts for 9.59 percent of which 75.51 percent are males and 24.49 percent females with an average employment of 3.77 persons per unit. In Dimapur, employment in micro enterprises account for 16.32 percent with an average employment of 1.96 persons per unit while employment in small enterprises 83.68 percent with an average employment of 25.64 persons per unit. In Kohima, employment in micro enterprises account for 60.80 percent with an average employment of 2.81 persons per unit, employment in small enterprises 36 percent with an average employment of 9 persons per unit and employment in medium enterprises 3.20 percent with an average employment of 4 persons per unit. In Phek, employment in micro enterprises account for 55.10 percent with an average employment of 2.45 persons per unit and employment in small enterprises 44.90 percent with an average employment of 11 persons per unit. Under small enterprises, the average employment is highest in Dimapur while in micro enterprises, the average employment is highest in Kohima. Average employment is highest in small enterprises in all the three towns implying that small enterprises generate more employment.

Table IV.1: Relationship between enterprises and employment in manufacturing sector (town-wise)

Town	Correlation		Regression				
	r	$t\text{-}value$	R^2	a	b	SE	N
Dimapur	0.91	2.13	0.82	-303.67	32	15.01	39
Kohima	0.30	0.31	0.09	17.23	2.23	7.15	33
Phek	-0.65	-0.86	0.42	24.50	-1.89	2.20	13
Overall	0.84	1.57	0.71	-91.60	9.25	5.89	85

Source: Field survey

*Note: * and ** sign indicates 5 percent and 1 percent significance level*

a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between manufacturing sector and employment (Table IV.1) is found to be r = 0.84 which indicates that there is a high degree of positive relationship. It implies that as the number of enterprises increases employment also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.71 indicating that 71 percent of the variation in the employment is caused by number of units. To see the effect of units on employment, the regression equation shows

$$Y=a+bX$$

$$Y=-91.60+9.25X$$

Where, Y is the dependent variable (employment) and X is the independent variable (units). This shows that an increase by a unit will have a positive impact on employment by 9.25 times. And since the estimated t-value is lower than the table value, it is statistically not significant. Therefore, hypothesis 1 can be accepted.

In Dimapur, the correlation between manufacturing sector and employment is found to be r = 0.91 which indicates that there is a high degree of positive relationship and the estimated t-value is 2.13 which shows that it is insignificant. The b coefficient is positive, therefore, there is a positive relationship between units and employment in

Dimapur. The R^2 is 0.82 which signifies that 82 percent of the variations on employment are explained by the units.

In Kohima, the coefficient of correlation between manufacturing sector and employment is found to be r = 0.30 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 0.31 which is statistically insignificant. Since b value at 2.23 is positive, manufacturing sector and employment are related. The coefficient of determination is 0.09 which indicates that only 9 percent of the variation on employment is explained by the independent variable (units).

Likewise, in Phek, the correlation between manufacturing sector and employment is found to be r = -0.65 which indicates that there is a moderate degree of negative relationship and the calculated t-value is 0.55 which is not statistically significant. The b value is negative (-1.89) which means that the sector has relatively low impact on employment generation. The R^2 = 0.42 which indicates that 42 percent of the variation on employment is explained by the number of units.

Table IV.2: Relationship between enterprises and employment in manufacturing sector (category-wise)

	Category-wise	Correlation		Regression				
		r	t-value	R^2	a	b	SE	N
Overall	Micro	0.88	1.86	0.78	2.74	2.27	1.22	66
	Small	0.97	3.86	0.94	-66.10	30.41	7.88	18
Dimapur	Micro	0.97	4.30	0.95	-7.07	2.69	0.62	28
	Small	0.79	1.28	0.62	-60.34	42.18	33.05	11
Kohima	Micro	-0.91	-2.12	0.82	67.12	-4.64	2.19	27

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In micro enterprises, the coefficient of correlation is r = 0.88 indicating a high degree of positive relationship. The value R^2 = 0.78 demonstrates that 78 percent of the variation on employment is explained by the units. The effect of units on employment in this sector shows that there is a positive impact on employment by 2.27 times and since the b coefficient is positive, it indicates that an increase in units of the enterprise is related to employment generation.

The correlation between micro enterprises and employment in Dimapur is found to be r = 0.97 which indicates that there is a high degree of positive relationship. Since the calculated t-value is smaller than the table value, it is statistically not significant.

The correlation between micro enterprises and employment in Kohima is found to be r = -0.91 which indicates that there is a high degree of negative. The coefficient of determination is 0.82 which implies that 82 percent of the change on employment is explained by the change in units. Since the calculated t-value is smaller than the table value, it is statistically not significant.

Similarly, in small enterprises, r is 0.97 indicating a high degree of positive correlation between units and employment and since the calculated t-value is lower than the table value, the effect is not significant but the b coefficient is positive, it can be concluded that an increase in the number of units is related to employment generation. In Dimapur, the correlation between small enterprises and employment is found to be r = 0.79 indicating a relatively high degree of positive relationship.

Resource-based enterprises and employment: Resource-based enterprises in the manufacturing sector are categorised into forest-based enterprises, mineral-based enterprises and agro-based enterprises. Forest-based enterprises employ 94 persons

comprising 62.77 percent males and 37.23 percent females, mineral-based enterprises employ 366 persons comprising 74.04 percent males and 25.96 percent females and agro-based employ 51 persons constituting 66.67 percent males and 33.33 percent females (appendix IV.2).

In Dimapur, forest-based enterprises generates employment to 43 persons with an average of 3.31 persons per unit, mineral-based enterprises 275 persons with an average of 16.18 persons per unit and agro-based enterprises 19 persons with an average of 2.11 persons per unit. Mineral-based enterprises absorb 81.60 percent of total employment in Dimapur followed by forest-based enterprises and agro-based enterprises.

Likewise, in Kohima, forest-based enterprises generates employment to 41 persons with an average of 5.86 persons per unit, mineral-based enterprises 69 persons with an average of 4.93 persons per unit and agro-based enterprises 15 persons with an average 1.25 persons per unit. In Kohima, mineral-based enterprises absorb 55 percent of the total employment followed by forest-based enterprises.

Similarly, in Phek, forest-based enterprises generate employment to 10 persons with an average of 2 persons per unit, mineral-based enterprises 22 persons with an average of 11 persons per unit and agro-based enterprises 17 persons with an average of 2.83 persons per unit. In Phek, mineral-based enterprises absorb 45 percent of the total employment followed by agro-based enterprises.

Table IV.3: Relationship between enterprises and employment in manufacturing sector (resource-based)

	Resource-based	Correlation		Regression				
		r	t-value	R^2	a	b	SE	N
Overall	Forest-based	0.73	1.07	0.54	4.25	3.25	3.031	25
	Mineral-based	0.78	1.23	0.60	-22.83	13.17	10.68	33
	Agro-based	-0.50	-.58	0.25	20.00	-0.33	0.58	27

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In forest-based activity, r is 0.73 which indicates that there is a moderate degree of positive relationship between forest-based enterprises and employment. In mineral-based activity, r is 0.78 which implies that there is a high degree of positive relationship between mineral-based enterprises and employment. In agro-based activity, r is -0.50 which indicates that there is a moderate degree of negative relationship between agro-based enterprises and employment. Of the three resource-based activities, the strength of relationship with employment is higher in mineral-based enterprises.

II: Manufacturing sector and income

II.1: Gross Monthly Income (GMI)

Manufacturing sectors generate a total monthly income of Rs 2,35,16,152 (Rupees two crore thirty-five lakhs sixteen thousand one hundred and fifty-two). The annual gross income generated by the 85 manufacturing units thus comes to Rs 28,21,93,824 (twenty-eight crore twenty-one lakhs ninety three thousand eight hundred and twenty-four). In terms of Gross Monthly Income (GMI) Dimapur accounts for 53 percent of the total GMI with Rs.12441890 (Rupees one crore twenty-four lakhs forty one thousand eight hundred and ninety), Kohima accounts for 32 percent with Rs 75,00,761 (Rupees seventy-five

lakhs seven hundred sixty-one) and Phek accounts for 15 percent with Rs 35,73,501 (Rupees thirty five lakhs seventy three thousand five hundred one). Average monthly GMI indicates that Dimapur has the highest with Rs 3,19,022.82 followed by Phek with Rs 2,74,884.69 and Kohima with Rs 2,27,295.79 (appendix IV.3).

Town-wise, category-wise and GMI: In Dimapur, GMI under micro enterprises is Rs. 43,68,077 which is 35.11 percent of the total GMI and the average GMI is Rs. 1,56,002.75 and in small enterprises, it is Rs. 80,73,813 which is 64.89 percent of the total GMI and the average GMI is Rs. 7,33,983. In Kohima, GMI in micro enterprises is Rs 39,95,285 which is 53.27 percent of the total GMI and the average GMI is Rs 1,47,973.52. In small enterprises, GMI is Rs 33,94,476 which is 45.26 percent of the total GMI and the average GMI is Rs 6,78,895.20. In medium enterprises, GMI is Rs1,11,000 which is 1.47 percent of the total GMI and the average GMI is Rs 1,11,000. In Phek, GMI under micro enterprises is Rs 9,91,501 which is 27.72 percent of the total GMI and the average GMI is Rs 9,01,36.46 and in small enterprises, it is Rs 25,82,000 which is 72.25 percent of the total GMI and the average GMI is Rs 12,91,000 (appendix IV.3).

Category-wise GMI shows that small enterprises generates the highest income with Rs 14050289 which is 59.75 percent of the total GMI followed by micro enterprises with Rs 9354863 which is 39.78 percent and medium enterprises with Rs 111000 which is 0.47 percent of the total GMI. This indicates that small enterprises are the most profitable with an average income of Rs 7,80,571 followed by micro with Rs 1,41,740.35 and medium enterprises with Rs 1,11,000.

Table IV.4: Relationship between enterprises and GMI in manufacturing sector (town-wise)

Town	Correlation		Regression				
	r	t	R^2	a	b	SE	N
Dimapur	0.96	3.27	0.91	-6970867	855243	261959	39
Kohima	0.55	0.66	0.30	-1473396	361241	546211	33
Phek	-0.97	-3.67	0.93	3610822	-558382	152319	13
Overall	0.93	2.60	0.87	-793014	304649	117223	85

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between manufacturing sector and GMI is found to be r = 0.93 which indicates that there is a high degree of positive relationship. It means that as the number of unit increases, GMI also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.87 indicating that 87 percent of the variation on GMI is caused by change in units. To see the effect of units on GMI, the regression equation shows

$$Y=a+bX$$

$$Y=-793015+304649X$$

Where, Y is the dependent variable (GMI) and X is the independent variable (units). This shows that an increase in a unit of enterprise will have a positive impact on GMI by 304649 times. And since the estimated t-value is lower than the table value, it is statistically not significant. Therefore, hypothesis 1 can be accepted.

In Dimapur, the correlation between manufacturing sector and GMI is found to be r = 0.96 which indicates that there is a high degree of positive relationship and the estimated t-value is 3.27 which shows that it is insignificant. The b coefficient is positive,

therefore, there is a positive relationship between units and GMI. The R^2 is 0.91 which implies that 91 percent of the variations on GMI are explained by the units.

In Kohima, the coefficient of correlation between manufacturing sector and GMI is found to be r = 0.55 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 0.66 which is statistically insignificant. Since b value is positive, manufacturing sector and GMI are positively corerelated. The coefficient of determination is 0.30 which indicates that only 30 percent of the variation on GMI is explained by the independent variable (units).

Likewise, in Phek, the correlation between manufacturing sector and GMI is found to be r = -0.97 which indicates that there is a high degree of negative relationship and the calculated t-value is -3.67 which is not statistically significant. The b value is negative which means that the sector has relatively low impact on GMI generation. The R^2 = 0.93 which indicates that 93 percent of the variation on GMI is explained by the number of units.

Table IV.5: Relationship between enterprises and GMI in manufacturing sector (category-wise)

Category-wise		Correlation		Regression				
		r	*t*	R^2	*a*	*b*	*SE*	*N*
Overall	Micro	0.99	20.64*	0.99	-1146131	193837	9393	66
	Small	0.98	5.04	0.96	876774	634443	125961	18
Dimapur	Micro	1	31.91*	0.99	-919944	252227	7902	28
	Small	0.96	3.31	0.92	-2591519	1446721	437676	11
Kohima	Micro	-0.25	-0.25	0.06	1968001	-70693	280318	27

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In micro enterprises, the coefficient of correlation is r = 0.99 indicating a high degree of positive relationship. The value R^2 = 0.99 demonstrates that 99 percent of the variation on GMI is explained by the units. The calculated t-value is higher than the table value and therefore, is statistically significant at 5 percent. The effect of units on GMI in this sector shows that there is a positive impact on GMI by 193837 times and since the b coefficient is positive, it indicates that an increase in unit is related to GMI.

The correlation between micro enterprises and GMI in Dimapur is found to be r = 1 which indicates that there is perfect positive correlation. Since the calculated t-value is higher than the table value, it is statistically significant at 5 percent.

The correlation between micro enterprises and GMI in Kohima is found to be r = - 0.25 which indicates that there is a low degree of negative relationship between micro enterprises and GMI. The coefficient of determination is 0.06 which implies that only 6 percent of the change on GMI is explained by the change in units. The calculated t-value is smaller than the table value, therefore, it is statistically not significant.

Similarly, in small enterprises, r is 0.98 indicating a high degree of positive correlation between units and GMI and since the calculated t-value is lower than the table value, the effect is not significant but the b coefficient is positive, therefore, it can be concluded that an increase in the number of units is related to GMI. In Dimapur, the correlation between small enterprises and GMI is found to be r = 0.96 indicating a relatively high degree of positive relationship. The coefficient of determination is 0.99 indicating that 99 percent of the variation in GMI has been explained by the units.

Resource-based enterprises and GMI: GMI in Dimapur is Rs 1,24,41,890 of which forest-based enterprises account for 23.61 percent with an average GMI of Rs. 225950.70

per unit, mineral-based enterprises 65.69 percent with an average GMI of Rs. 480778.80 per unit and agro-based enterprises 10.70 percent with an average GMI of Rs. 147921.33 per unit (appendix IV.4).

In Kohima, GMI is Rs. 75,00,761 of which forest-based enterprises account for 22.48 percent with an average GMI of Rs. 240857.1 per unit, mineral-based enterprises 68.80 percent with an average GMI of Rs. 368625.1 per unit and agro-based enterprises 8.72 percent with an average GMI of Rs. 54500.75 per unit.

In Phek, forest-based enterprises account for 13.07 percent with an average GMI of Rs. 93429.2 per unit, mineral-based enterprises 72.25 percent with an average GMI of Rs. 1291000 per unit and agro-based enterprises 14.67 percent with an average GMI of Rs. 87392.5per unit.

Table IV.6: Relationship between enterprises and GMI in manufacturing sector (resource-based)

	Resource-based	Correlation		Regression				
		r	t-value	R^2	a	b	SE	N
Overall	Forest-based	0.96	3.57	0.93	-683579	285650	80114	25
	Mineral-based	0.93	2.52	0.86	1701190	327648	130195	33
	Agro-based	0.15	0.15	0.02	642071	21609	142819	27

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between forest-based enterprises and gross income is found to be r = 0.96 indicating a high degree of positive relationship. The correlation between mineral-based enterprises and gross income is found to be r = 0.93 indicating a high degree of

positive relationship. The correlation between agro-based enterprises and gross income is found to be r = 0.15 indicating a low degree of positive relationship.

II.2: Net Monthly Income (NMI)

The Net Monthly Income (NMI) of the 85 manufacturing units is Rs 28,40,575 (Rupees Twenty-eight lakhs forty thousand five hundred seventy-five) which is 12 percent of the GMI. The annual total NMI thus comes to Rs 34,08,6900.

Town-wise, category-wise and NMI: In Dimapur, NMI is Rs. 1,24,41,890 of which Rs. 581675 (40.83 percent) are from micro enterprises with an average income of Rs. 20774.11 per unit and Rs. 843000 (59.17 percent) are from small enterprises with an average income of Rs. 76636.36 per unit. In Kohima, micro enterprises account for 56.87 percent of the NMI with an average income of Rs. 25885.19, small enterprises 39.06 percent of the NMI with an average of Rs. 96000 per unit and medium enterprises 4.07 percent of the NMI of Kohima. In Phek, micro enterprises account for 59.89 percent of the NMI with an average NMI of Rs. 10181.82 and small enterprises 40.11 percent of the NMI with an average of Rs. 37500 per unit (appendix IV.5).

Table IV.7: Relationship between enterprises and NMI in manufacturing sector (town-wise)

Town	Correlation		Regression				
	r	*t*	R^2	*a*	*b*	*SE*	*N*
Dimapur	0.95	2.88	0.89	-518268	76397	26499	39
Kohima	0.67	0.91	0.45	-396497	73285	80891	33
Phek	-.64	-.84	0.41	80500	-4192	4996	13
Overall	0.99	13.96*	0.99	-427567	48509	3475	85

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between manufacturing sector and NMI is found to be r = 0.99 which indicates that there is a high degree of positive relationship. It means that enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is significant since the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.99 indicating that 99 percent of the variation on NMI is caused by change in units. To see the effect of units on NMI, the regression equation shows

$$Y=a+bX$$

$$Y=-427567+48509X$$

Where, Y is the dependent variable (NMI) and X is the independent variable (units). This shows that an increase in a unit of enterprise will have a positive impact on NMI by 48509 times. And since the estimated t-value is higher than the table value, it is statistically significant.

In Dimapur, the correlation between manufacturing sector and NMI is found to be r = 0.95 which indicates that there is a high degree of positive relationship and the estimated t-value is 2.88 which shows that it is insignificant. The b coefficient is positive, therefore, there is a positive relationship between units and NMI. The R^2 is 0.89 which implies that 89 percent of the variations on NMI are explained by the units.

In Kohima, the coefficient of correlation between manufacturing sector and NMI is found to be r = 0.67 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 0.91 which is statistically insignificant. Since b value is positive, manufacturing sector and NMI are positively related. The coefficient of determination is 0.45 which indicates that only 45 percent of the variation on NMI is explained by the independent variable (units).

Likewise, in Phek, the correlation between manufacturing sector and NMI is found to be r = -0.64 which indicates that there is a moderate degree of negative relationship and the calculated t-value is -0.84 which is not statistically significant. The b value is negative which means that the sector has relatively low impact on NMI. The R^2 = 0.41 which indicates that 41 percent of the variation on NMI is explained by the number of units.

Table IV.8: Relationship between enterprises and NMI in manufacturing sector (category-wise)

Category-wise		Correlation		Regression				
		r	t	R^2	a	b	SE	N
Overall	Micro	0.97	4.05	0.94	-231172	31607	7812	66
	Small	0.98	5.09	0.96	8762	78262	15382	18
Dimapur	Micro	0.96	0.18	0.92	47219	15556	4572	28
	Small	0.82	1.45	0.68	-169833	114375	78880	11
Kohima	Micro	0.18	0.18	0.03	126702	11807	65203	27

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In micro enterprises, the coefficient of correlation is r = 0.97 indicating a high degree of positive relationship. The value R^2 = 0.94 demonstrates that 94 percent of the variation in NMI is explained by the units. The calculated t-value is lower than the table value and therefore, is not statistically significant. The effect of units on NMI in this sector shows that there is a positive impact on NMI by 31607 times and since the b coefficient is positive, it indicates that an increase by a unit is related to NMI.

The correlation between micro enterprises and NMI in Dimapur is found to be r =0.96 which indicates that there is a positive relationship. Since the calculated t-value is lower than the table value, it is not statistically significant.

The correlation between micro enterprises and NMI in Kohima is found to be r = -0.18 which indicates that there is a low degree of negative relationship between micro enterprises and NMI. The coefficient of determination is 0.03 which implies that only 3 percent of the change on NMI is explained by the change in units. Since the calculated t-value is smaller than the table value, it is statistically not significant.

Similarly, in small enterprises, r is 0.98 indicating a high degree of positive correlation between units and NMI and since the calculated t-value is lower than the table value, the effect is not significant but the b coefficient is positive, therefore, it can be concluded that a change in units of enterprise is related to NMI. In Dimapur, the correlation between small enterprises and NMI is found to be r = 0.82 indicating a high degree of positive relationship. The coefficient of determination is 0.68 indicating that 68 percent of the variation on NMI has been explained by the units.

Resource-based enterprises and NMI: NMI in Dimapur is Rs 14,24,675 of which forest-based enterprises account 24.74 percent with an average NMI of Rs. 27115.38 per unit, mineral-based enterprises account 59.08 percent with an average NMI of Rs. 49510.29 per unit and agro-based enterprises account 16.18 percent with an average NMI of Rs. 2561.11 per unit (appendix IV.6).

Likewise, in Kohima, NMI is Rs.12,28,900 of which forest-based enterprises account for 17.08 percent with an average NMI of Rs.29985.71 per unit, mineral-based enterprises 70.23 percent with an average NMI of Rs. 61642.86 per unit and agro-based enterprises 12.69 percent with an average NMI of Rs. 13000 per unit.

Similarly, Phek's NMI is Rs. 1,87,000 of which forest-based enterprises account for 25.67 percent showing an average NMI of Rs. 9600 per unit, mineral-based

enterprises 40.11 percent showing an average NMI of Rs. 37500 per unit and agro-based enterprises 34.22 percent showing an average NMI of Rs10666.67 per unit.

In forest-based enterprises, NMI average is highest in Kohima with Rs. 29985.71 followed by Dimapur; in mineral-based enterprises, NMI average is highest in Kohima with Rs. 61642.86 followed by Dimapur and in agro-based enterprises, NMI average is highest in Dimapur with Rs. 25611.11 followed by Kohima.

Table IV.9: Relationship between enterprises and NMI in manufacturing sector (resource-based)

	Resource-based	Correlation		Regression				
		r	t- vavlue	R^2	a	b	SE	N
Overall	Forest-based	0.95	3.04	0.90	-86229	34763	11428	25
	Mineral-based	0.98	4.60	0.96	-14748	55270	12005	33
	Agro-based	0.55	0.66	0.30	12167	15333	23190	27

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between forest-based enterprises and net income is found to be r = 0.95 indicating a high degree of positive relationship. The correlation between mineral-based enterprises and net income is found to be r = 0.98 indicating a high degree of positive relationship. The correlation between agro-based enterprises and net income is found to be r = 0.55 indicating a moderate degree of positive relationship.

Relationship between ownership and income: In the manufacturing sector, the coefficient of correlation of sole proprietorship with GMI and NMI is r = 0.97 and r = 0.99 respectively indicating a high degree of positive relationship and have a statistical significance of 1 percent level (1-tailed). Due to less number of observations in the

category of partnership, cooperative, family enterprise and self-help group, correlation result could not be found to be well behaved for interpretation.

Table IV.10: Ownership and income (In Rs.) in manufacturing sector

		Dimapur	Kohima	Phek	Total
SP	Units	38	28	9	75
	GMI	12294740	7218902	3426492	22940134
	NMI	1409675	1136900	175000	2721575
PP	Units	1	-	-	1
	GMI	147150	-	-	147150
	NMI	15000	-	-	15000
CO	Units	-	1	-	1
	GMI	-	111000	-	111000
	NMI	-	50000	-	50000
FA	Units	-	2	-	2
	GMI	-	56592	-	56592
	NMI	-	9000	-	9000
SHG	Units	-	2	4	6
	GMI	-	114267	147009	261276
	NMI	-	33000	12000	45000

Source: Field survey
* SP= Sole Proprietor, PP= Partnership, CO= Co-operative, FM= Family,
SHG= Self help group

Relationship between education and income: The coefficient of correlation between income and different levels of education in the manufacturing sector shows that there is a high degree of positive correlation between below matric, matriculate and graduate with GMI which shows r = 0.97, r = 0.77 and r = 0.85 respectively whereas at r = 0.65 there is a moderate degree of positive relationship between 10+2 and GMI. Due to less observation in the category of post-graduate, correlation result is not taken for consideration. Likewise, in terms of NMI, there is a moderate degree of positive relationship in the category of below matric, matriculate and 10+2 level with NMI at r = 0.58, r = 0.64 and r = 0.73 respectively while in graduate there is a high degree of

positive relationship which shows r = 0.91 indicating that higher education has better impact on NMI.

Table IV.11: Education and income (In Rs.) in manufacturing sector

Education		Dimapur	Kohima	Phek	Total
Below matric	Units	12	8	4	24
	GMI	1821139	821563	421546	3064248
	NMI	216675	338400	47000	602075
Matriculate	Units	12	8	4	24
	GMI	3013522	3627832	138884	6780238
	NMI	302500	463000	12500	778000
10+2	Units	1	10	4	15
	GMI	1125000	2000528	2174571	5300099
	NMI	185000	322500	87500	595000
Graduate	Units	10	5	1	16
	GMI	4552813	378538	838500	5769851
	NMI	500500	51500	40000	592000
Post Graduate	Units	4	2	-	6
	GMI	1929416	672300	-	2601716
	NMI	220000	53500	-	273500

Source: same as Table IV.10

Relationship between age and income: In the manufacturing sector, the correlation between age and income is shown in Table IV.12 and it is found that there is a high degree of correlation in the age groups of 40-50 years and 50 years and above with GMI which is r = 0.93 and r = 0.96 respectively whereas correlation between the age group 30-40 years and GMI is r = -0.12 showing low degree of negative relationship. Likewise, the correlation between age and NMI in services sector shows a high degree of positive relationship in the age groups of 40-50 years and 50 years and above with NMI which is r = 0.99 and r = 0.81 respectively whereas correlation between the age group 30-40 years and NMI is r = -0.28 representing a moderate degree of negative relationship. Due to less number of in the age group of 20-30 years, results were not considered for interpretation.

Table IV.12: Age and income (In Rs.) in manufacturing sector

Age		Dimapur	Kohima	Phek	Total
20-30	Units	2	2	-	4
	GMI	171054	735378	-	906432
	NMI	38750	55000	-	93750
30-40	Units	3	7	4	14
	GMI	1304500	848011	151434	2303945
	NMI	210000	114900	32500	357400
40-50	Units	15	12	5	32
	GMI	4592460	2138463	652567	7383490
	NMI	516925	298000	29500	844425
50+	Units	19	12	4	35
	GMI	6373876	3778909	2769500	12922285
	NMI	659000	761000	125000	1545000

Source: same as Table IV.10

III: Service sector and employment

Services sector employs 1062 persons of which 907 (85.40 percent) are males and 155 (14.60 percent) females. A further break-up shows that micro enterprises employ 311 persons of which 284 (91.32 percent) are males and 27 (8.68 percent) females, small enterprise employs 401 persons of which 369 (92.02 percent) are males and 32 (7.98 percent) females and medium enterprise employs 350 persons comprising 254 (72.57 percent) males and 96 (27.43 percent) females.

Town-wise, category-wise and employment: Employment in Dimapur accounts for 56.97 percent of the total employment with an average employment of 5.99 per unit of which 90.25 percent are males and 9.75 percent females. Employment in Kohima accounts for 36.53 percent of the total employment with an average employment of 4.41 per unit of which 77.84 percent are males and 22.16 percent females. Employment in Phek accounts

for 6.50 percent of the total employment with an average employment of 1.57 per unit comprising 85.51 percent males and 14.49 percent females (appendix IV.7).

In Dimapur, under micro enterprises, employment constitute 20.33 percent with an average employment of 2.32 persons per unit, employment in small enterprises 50.74 percent with an average employment of 6.98 persons per unit and medium enterprises 28.93 percent with an average employment of 43.75 persons per unit. In Kohima, employment in micro enterprises constitute 32.22 percent with an average employment of 1.92 persons per unit, employment in small enterprises 22.68 percent with an average employment of 5.18 persons per unit and employment in medium enterprises 45.10 percent with an average employment of 29.17 persons per unit. In Phek, micro enterprises constitute 91.30 percent with an average employment of 1.54 persons per unit and small enterprises 8.70 percent with an average employment of 2 persons per unit. In micro, small and medium enterprises, the average employment is higher in Dimapur followed by Kohima and Phek.

Table IV.13: Relationship between enterprises and employment in services sector (town-wise)

Town	Correlation		Regression				
	r	t	R^2	a	b	SE	N
Dimapur	0.98	6.21*	0.95	26.99	4.92	0.79	101
Kohima	-0.13	-0.19	0.02	105.09	-0.37	1.95	88
Phek	0.88	1.82	0.77	8.91	0.96	0.53	44
Overall	0.70	2.92*	0.49	26.25	3.32	1.14	233

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between services sector and employment (appendix IV.1) is found to be r = 0.70 which indicates that there is a moderate degree of positive relationship. It means as enterprises increases, employment also increases. At the level of significance alpha=0.05, the result shows that correlation is significant since the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.49 indicating that 49 percent of the variation on employment is caused by number of units. To see the effect of units on employment, the regression equation shows

$$Y = a + bX$$

$$Y = 26.25 + 3.32X$$

Where, Y is the dependent variable (employment) and X is the independent variable (units). This implies that as enterprise increases by a unit, employment will increase by 3.32 times. And since the estimated t-value is higher than the table value, it is statistically significant at 5 percent.

In Dimapur, the correlation between services sector and employment is found to be r = 0.98 which indicates that there is a high degree of positive relationship and the estimated t-value is 6.21 which shows that it is significant. The b coefficient is positive, therefore, there is a positive relationship between units and employment in Dimapur. The R^2 is 0.95 which signifies that 95 percent of the variations on employment are explained by the units.

In Kohima, the coefficient of correlation between services sector and employment is found to be r = -0.13 which indicates that there is a moderate degree of positive relationship. The calculated t-value is - 0.19 which is statistically insignificant. The coefficient of determination is 0.02 which indicates that only 2 percent of the variation on employment is explained by the independent variable (units).

Likewise, in Phek, the correlation between services sector and employment is found to be r = 0.88 which indicates that there is a high degree of positive relationship. The calculated t-value which is 1.82 is lower than the table value therefore, it is not statistically significant. The b value is positive therefore, the sector has positive impact on employment generation. The R^2 = 0.77 which indicates that 77 percent of the variation on employment is explained by the number of units.

TableV.14: Relationship between enterprises and employment in services sector (category-wise)

Category		Correlation		Regression				
		r	t	R^2	a	b	SE	N
Overall	Micro	0.79	3.68**	0.63	10.71	1.28	0.35	159
	Small	0.97	9.95**	0.93	3.70	5.75	0.58	64
	Medium	1	37.35*	0.99	42.90	22.13	0.59	10

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In micro enterprises, the coefficient of correlation is r = 0.79 indicating a high degree of positive relationship between micro sector and employment. The value R^2 = 0.63 demonstrates that 63 percent of the variation on employment is explained by micro sector units. The effect of units on employment shows that there is a positive impact of a change in unit of the enterprise on employment by 1.28 times. The estimated t-value is higher than the table value and therefore, is significant at1 percent. The b coefficient is positive which indicates that an increase by a unit of enterprise is related to employment generation.

Similarly, in small enterprises, r is 0.97 indicating a perfect positive correlation between units and employment and since the calculated t-value is higher than the table

value, the effect is statistically significant at 1 percent. The b coefficient is positive, therefore, it can be concluded that a change in units of the enterprise is related to employment generation. The value $R^2 = 0.93$ demonstrates that 93 percent of the variation in employment is explained by small sector units.

Likewise, in medium enterprises, r is equal to unity indicating a perfect positive correlation between units and employment and since the calculated t-value is higher than the table value, the effect is significant at 5 percent level. The b coefficient is positive, therefore, it can be concluded that a change in units of the enterprise is positively related to employment generation. The value $R^2 = 0.99$ demonstrates that 99 percent of the variation on employment is explained by medium sector units.

Activity-wise and employment: The activities in the services sector are categorised into shops, transport, workshops and hotels. In Dimapur, shops generate 399 (65.95 percent) of employment with an average of 5.32 persons per unit; transport 63 (10.41 percent) of employment with an average of 5.25 persons per unit; workshops generate employment to 35 (5.79 percent) persons with an average of 4.38 persons per unit; and hotels generate employment to 108 (17.85 percent) persons with an average 18 persons per unit (appendix IV.8).

Likewise, in Kohima, shops generate employment to 90 (23.20 percent) persons with an average of 1.58 persons per unit; transport generates employment to 30 (7.73 percent) persons with an average of 2.73 persons per unit; workshops generate employment to 82 (21.13 percent) persons with an average of 6.83 persons per unit; and hotels generate employment to 186 (47.94 percent) persons with an average 23.25 persons per unit

Similarly, in Phek, shops generate employment to 39 (56.52 percent) persons with an average of 1.26 persons per unit; transport generates employment to 8 (11.59 percent) persons with an average of 1.14 persons per unit; and workshops generate employment to 22 (31.88 percent) persons with an average of 3.67 persons per unit.

Table IV.15: Relationship between enterprises and employment in services sector (activity-wise)

Activity		Correlation		Regression				
		r	t	R^2	a	b	SE	N
	Shops	0.88	1.84	0.77	-244.60	7.74	4.20	163
Overall	Transport	0.90	2.08	0.81	-60.62	9.43	4.54	30
	Workshops	0.99	7.89	0.98	-42.50	10.25	1.30	26

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between shops and employment is found to be r = 0.88 which indicates that there is a high degree of positive relationship. It means that increasing enterprises are related to higher employment level. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.77 indicating that 77 percent of the variation in the employment is caused by number of units. To see the effect of units on employment, the regression equation shows

$$Y=a+bX$$

$$Y=-244.60+7.74X$$

Where, Y is the dependent variable (employment) and X is the independent variable (units). This shows that an increase by a unitwill have a positive impact on employment

by 7.74 times. And since the estimated t-value is lower than the table value, it is not statistically significant

The correlation between transport and employment is found to be r = 0.90 which indicates that there is a high degree of positive relationship. It means as enterprises increases, employment also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.81 indicating that 81 percent of the variation on employment is caused by number of units.

The correlation between workshops and employment is found to be r = 0.99 which indicates that there is a high degree of positive relationship. At the level of significance alpha=0.05, the result shows that correlation is not significant because the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.98 indicating that 98 percent of the variation on employment is caused by number of units.

IV: Service sector and income

IV.1: Gross Monthly Income

The total Gross Monthly Income generated by service sector is Rs. 2,49,82,777 (Rupees Two crore forty-nine lakhs eighty-two thousand seven hundred seventy-seven). The total gross annual income generated by service sector thus comes to Rs. 29,97,93,324 (Rupees Twenty nine crore ninety seven lakhs ninety three thousand three hundred and twenty-four).

Town-wise, category-wise and GMI: In terms of income, out of the total GMI of Rs.2,49,82,777, town-wise distribution is 69.88 percent, 24.78 percent and 5.34 percent in Dimapur, Kohima and Phek respectively. In category-wise, micro enterprises account for 23.80 percent, small enterprises 39.41 percent and medium enterprises 36.79 percent. In Dimapur, category-wise GMI comprises 13.97 percent in micro enterprises, 47.33 percent in small enterprises and 38.69 percent in medium enterprises. The average GMI is highest in medium enterprises at Rs.16,88,717 per unit. In Kohima, category-wise GMI shows 38.54 percent in micro enterprises, 22.10 percent in small enterprises and 39.36 percent in medium enterprises. The average GMI is highest in medium enterprises at Rs.4,06,167 per unit. In Phek, category-wise GMI comprises 84.04 percent in micro enterprises and 15.96 percent in small enterprises, whereby average GMI is highest in small enterprises at Rs.70,947 per unit. Comparing the three towns, Dimapur's average GMI at Rs.1,72,854 per unit is higher than Kohima and Phek (appendix IV.9).

Table IV.16: Relationship between enterprises and GMI in services sector (town-wise)

Town	Correlation		Regression				
	r	t-value	R^2	a	b	SE	N
Dimapur	0.95	4.28	0.90	723769	144190	33723	101
Kohima	0.37	0.56	0.13	1199331	15834	28458	88
Phek	0.98	4.98	0.96	112105	22670	4552	44
Overall	0.75	3.35**	0.56	56752	104543	31211	233

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between services sector and GMI is found to be r = 0.75 which indicates that there is a moderate degree of positive relationship. It means that enterprises increases, GMI also increases. At the level of significance alpha=0.05, the result shows

that correlation is statistically significant at 1. The coefficient of determination or R^2 is 0.56 indicating that 56 percent of the variation on GMI is caused by change in units. To see the effect of units on GMI, the regression equation shows

$$Y=a+bX$$

$$Y=56752+104543X$$

Where, Y is the dependent variable (GMI) and X is the independent variable (units). This shows that an increase by a unit of enterprise will have a positive impact on GMI by 104543 times. And since the estimated t-value is higher than the table value, it is statistically significant.

In Dimapur, the correlation between services sector and GMI is found to be r = 0.95 which indicates that there is a high degree of positive relationship and the estimated t-value is 4.28 which shows that it is insignificant. The b coefficient is positive, therefore, there is a positive relationship between units and GMI. The R^2 is 0.90 which implies that 90 percent of the variations on GMI are explained by the units.

In Kohima, the coefficient of correlation between services sector and GMI is found to be r = 0.37 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 0.56 which is statistically insignificant. Since b value is positive, services sector and GMI are related. The coefficient of determination is 0.13 which indicates that only 13 percent of the variation on GMI is explained by the independent variable (units).

Likewise, in Phek, the correlation between services sector and GMI is found to be r = 0.98 which indicates that there is a high degree of positive relationship. Tthe calculated t-value is lower than the table value, itis not statistically significant. The $R^2 =$

0.96 which indicates that 96 percent of the variation on GMI is explained by the number of units.

Table IV.17: Relationship between enterprises and GMI in services sector (category-wise)

Category		Correlation		Regression				
		r	t-value	R^2	a	b	SE	N
Overall	Micro	0.94	8.02**	0.89	53997	34002	4242	159
	Small	0.97	11.44**	0.95	-162488	176673	15439	64
	Medium	-0.54	-0.65	0.29	3533155	140760	217889	10

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In micro enterprises, the coefficient of correlation is r = 0.94 indicating a high degree of positive relationship between micro enterprise and employment. The value R^2 = 0.89 demonstrates that 89 percent of the variation on GMI is explained by micro sector units. The estimated t-value is higher than the table value and therefore is significant at 1 percent. The b coefficient is positive which indicates that an increase by a unit of enterprise is positively related to GMI.

Similarly, in small enterprises, r is 0.97 indicating a high degree of positive correlation between units and GMI and since the calculated t-value is higher than the table value, the effect is significant at 1 percent. The b coefficient is positive, therefore, it is concluded that a change in units of the enterprise is related to GMI. The value R^2 = 0.95 demonstrates that 95 percent of the variation on GMI is explained by small sector units.

Likewise, in medium enterprises, r is -0.54 indicating a moderate degree of negative correlation between units and GMI. Since the calculated t-value is lower than the table value, the effect is not significant. The b coefficient is positive, therefore, it can

be concluded that a change in units of enterprise is related to GMI. The value $R^2 = 0.29$ demonstrates that 29 percent of the variation on GMI is explained by medium sector units.

Activity-wise and GMI: In terms of activity-wise income, shops contributed 58.69 percent of GMI followed by hotels (25.52 percent), transport (10.15) and workshops (5.64). In Dimapur, contribution to GMI shows 66.74 percent from shops, 9.38 percent from transport, 2.34 percent from workshops and 21.54 percent from hotels. The average GMI is highest in hotels at Rs.6,26,667 per unit. In Kohima, contribution to GMI comprises 35.51 percent from shops, 9.09 percent transport, 13.15 percent workshops and 42.25 percent hotels. The average GMI is highest in hotels at Rs.3,26,911 per unit. In Phek, contribution to GMI comprises 60.90 percent in shops, 25.23 percent transport and 13.87 percent workshops, whereby average GMI is highest in transport at Rs.48.071 per unit. Comparing the three towns, Dimapur's average GMI per unit is higher in all activities than Kohima and Phek (appendix IV.10).

Table IV.18: Relationship between enterprises and GMI in services sector (activity-wise)

Activity		Correlation		Regression				
		r	t	R^2	a	b	SE	N
Overall	Shops	0.87	1.79	0.76	-7754471	232673	130275	163
	Transport	0.77	1.20	0.59	-1174603	202019	167953	30
	Workshops	1	38.99*	0.99	-434834	104344	2676	26

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between shops and GMI is found to be r = 0.87 which indicates that there is a high degree of positive relationship. It means as enterprises increases, GMI also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of

determination or R^2 is 0.76 indicating that 76 percent of the variation on GMI is caused by number of units. To see the effect of units on GMI, the regression equation shows

$$Y=a+bX$$

$$Y=-7754471+232673X$$

Where, Y is the dependent variable (GMI) and X is the independent variable (units). This shows that an increase by a unit of enterprise will have a positive impact on GMI by 232673 times. And since the estimated t-value is lower than the table value, it is not statistically significant

The correlation between transport and GMI is found to be r = 0.77 which indicates that there is a high degree of positive relationship. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.59 indicating that 59 percent of the variation on GMI is caused by number of units.

The correlation between workshops and GMI is found to be r = 1which indicates that there is a perfect positive relationship. At the level of significance alpha=0.05, the result shows that correlation is significant at 1 percent level because the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.99 indicating that 99 percent of the variation on GMI is caused by number of units.

IV.2: Net Monthly Income

The total Net Monthly Income generated by service sector is Rs.1,31,11,609 (Rupees One crore thirty-one lakhs eleven thousand six hundred nine). The total net annual income generated by service sector thus comes to Rs 15,73,39,308 (Rupees Fifteen crore seventy-three lakhs thirt-nine thousand three hundred and eight).

Town-wise, category-wise and NMI: Out of the total NMI of Rs.1,31,11,609 in services sector, it comprises 74.94 percent, 20.50 percent and 4.56 percent in Dimapur, Kohima and Phek respectively. In category-wise, micro enterprises account for 20.48 percent, small enterprises 35.74 percent and medium enterprises 43.78 percent. NMI in Dimapur comprises 11.31 percent, 40.85 percent and 47.84 percent in micro, small and medium enterprises; NMI in Kohima comprises 41.32 percent 19.98 percent and 38.70 percent in micro, small and medium enterprises respectively; and NMI in Phek comprises 77.34 percent and 22.66 percent in micro and small enterprises respectively. Among the towns, average NMI is highest in Dimapur (appendix IV.11).

Table IV.19: Relationship between enterprises and NMI in services sector (town-wise)

Town	Correlation		Regression				
	r	t	R^2	a	b	SE	N
Dimapur	0.90	2.85	0.80	353880	83268	29260	101
Kohima	0.59	1.04	0.35	333378	15387	14819	88
Phek	0.96	3.39	0.92	16668	12465	3677	44
Overall	0.73	3.19*	0.53	-122468	620545	19440	233

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between services sector and NMI is found to be r = 0.73 which indicates that there is a moderate degree of positive relationship. It means as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is statistically significant at 5 percent since the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.53 indicating that 53 percent of the variation on NMI is caused by change in units. To see the effect of units on NMI, the regression equation shows

$$Y=a+bX$$

$$Y=-122468+620545X$$

Where, Y is the dependent variable (NMI) and X is the independent variable (units). This shows that an increase by a unit of enterprise will have a positive impact on NMI by 620545 times. And since the estimated t-value is higher than the table value, it is statistically significant.

In Dimapur, the correlation between services sector and NMI is found to be r = 0.90 which indicates that there is a high degree of positive relationship and the estimated t-value is lower than the table value, it is statistically insignificant. The b coefficient is positive, therefore, there is a positive relationship between units and NMI. The R^2 is 0.80 which implies that 80 percent of the variations on NMI are explained by the units.

In Kohima, the coefficient of correlation between services sector and NMI is found to be r = 0.59 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 1.04 which is statistically insignificant. Since b value is positive, services sector and NMI are related. The coefficient of determination is 0.35 which indicates that only 35 percent of the variation on NMI is explained by the independent variable (units).

Likewise, in Phek, the correlation between services sector and NMI is found to be r = 0.9 which indicates that there is a high degree of positive relationship and the calculated t-value is 3.39 which is not statistically significant. The R^2 = 0.92 which indicates that 92 percent of the variation on NMI is explained by the number of units.

Table IV.20: Relationship between enterprises and NMI in services sector (category-wise)

Category		Correlation		Regression				
		r	t	R^2	a	b	SE	N
Overall	Micro	0.95	8.74**	0.91	-54218	20297	2322	159
	Small	0.99	15.30**	0.97	-239449	106899	6988	64
	Medium	-0.98	-4.63	0.96	2911579	-299474	64724	10

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

In micro enterprises, the coefficient of correlation is r = 0.95indicating a high degree of positive relationship between micro enterprise and employment. The value R^2 = 0.91 demonstrates that 91 percent of the variation on NMI is explained by micro sector units. The estimated t-value is higher than the table value and therefore is significant at 1 percent. The b coefficient is positive which indicates that an increase by a unit of enterprise is positively related to NMI.

Similarly, in small enterprises, r is 0.99 indicating a high degree of positive correlation between units and NMI and since the calculated t-value is higher than the table value, the effect is significant at 1 percent. The b coefficient is positive, therefore, it can be concluded that an increase in units of enterprise is related to NMI. The value R^2 = 0.97 demonstrates that 97 percent of the variation on NMI is explained by small sector units.

Likewise, in medium enterprises, r is -0.98 indicating a high degree of negative correlation between units and NMI and since the calculated t-value is lower than the table value, the effect is not significant. The value R^2 = 0.96 demonstrates that 96 percent of the variation on NMI is explained by medium sector units.

Activity-wise and NMI: Distribution of NMI shows that shops contribute 63.96 percent, transport 3.76 percent, workshops 2.68 percent and hotels 29.60 percent. In Dimapur, contribution to NMI shows 68.42 percent shops, 2.27 percent transport, 1.32 percent workshops and 27.99 percent hotels; NMI in Kohima comprises 46.95 percent shops, 4.24 percent transport, 6.75 percent workshops and 42.06 percent hotels; and NMI in Phek comprises 67 percent shops, 26.23 percent transport and 6.77 percent workshops. In Dimapur, highest NMI contributor is shops followed by hotels but in terms of average NMI per unit, the highest contributor to NMI is hotels and is followed by shops. In Kohima, highest NMI contributor is shops followed by hotels but in terms of average NMI per unit, the highest contributor to NMI is hotels and is followed by shops. Similarly, in Phek, highest NMI contributor is shops followed by transport but in terms of average NMI per unit, the highest contributor to NMI is transport and is followed by shops (appendix IV.12).

Table IV.21: Relationship between enterprises and NMI in services sector (activity-wise)

Activity		Correlation		Regression				
		r	t	R^2	a	b	SE	N
Overall	Shops	0.88	1.82	0.77	-4586002	135851	74629	163
	Transport	0.30	0.32	0.09	101670	6281	19686	30
	Workshops	0.94	2.79	0.89	-73179	21982	7887	26

Source: Field survey
*Note: * and ** sign indicates 5 percent and 1 percent significance level*
a = constant, b= beta, SE = Standard Error, N = number of observations

The correlation between shops and NMI is found to be r = 0.88 which indicates that there is a high degree of positive relationship. It means as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of

determination or R^2 is 0.77 indicating that 77 percent of the variation on NMI is caused by number of units. To see the effect of units on NMI, the regression equation shows

$$Y=a+bX$$

$$Y=-4586002+135851X$$

Where, Y is the dependent variable (NMI) and X is the independent variable (units). This means that an increase by a unit of enterprise will have a positive impact on NMI by 135851 times. And since the estimated t-value is lower than the table value, it is not statistically significant

The correlation between transport and NMI is found to be r = 0.30 which indicates that there is a high degree of positive. It implies that as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.09 indicating that only 9 percent of the variation on NMI is caused by number of units.

The correlation between workshops and NMI is found to be r = 94 which indicates that there is a high degree of positive relationship. It implies that as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is significant at 1 percent level because the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.89 indicating that 89 percent of the variation on NMI is caused by number of units.

Relationship between ownership and income: In services sector, the coefficient of correlation of sole proprietorship with GMI and NMI is r = 0.76 and r = 0.81 respectively indicating a high degree of positive relationship. In comparison between manufacturing

sector and services sector, services sector correlation is lower than manufacturing sector suggesting that manufacturing sector contributes more to GMI and NMI.

Table IV.22: Ownership and income (in Rs.) in services sector

		Dimapur	Kohima	Phek	Total
SP	Units	89	81	43	213
	GMI	14784899	4838764	1299800	20923463
	NMI	9042600	2106059	592450	11741109
PP	Units	9	3		12
	GMI	2339164	171100		2510264
	NMI	555000	42000		597000
FA	Units	3	4		7
	GMI	334200	1180850		1515050
	NMI	228000	539500		767500
SHG	Units			1	1
	GMI			34000	34000
	NMI	-	-	6000	6000

Source: same as Table IV.10

Relationship between education and income: The correlation results between income and different levels of education in services sector shows that there is a negative relationship between below matric and GMI at r=-0.31, moderate degree of positive relationship in the category of matriculate at r = 0.60 and there is a high degree of positive relationship of 10+2 level and graduate with GMI at r = 0.83 and r = 0.86 respectively indicating that higher education has better impact on GMI. Likewise in terms of NMI, there is a low degree of positive correlation with below matric which is r=0.21, while in matriculate, 10+2 and graduate there is a high degree of positive relationship with GMI at r = 0.75, r = 0.85 and r = 0.89 respectively indicating that higher education is bringing higher income. Due to less observation in the category of post graduate, correlation result is not taken into consideration.

Table IV.23: Education and income (in Rs.) in services sector

Education		Dimapur	Kohima	Phek	Total
Below matric	Units	20	15	18	53
	GMI	760325	668550	479530	1908405
	NMI	296500	318500	211500	826500
Matriculate	Units	22	26	15	63
	GMI	1753088	1281880	443530	3478498
	NMI	936500	548000	202100	1686600
10+2	Units	16	14	4	34
	GMI	1791100	669675	124700	2585475
	NMI	979000	319859	43000	1341859
Graduate	Units	39	27	7	73
	GMI	12454586	2691164	286040	15431790
	NMI	7478600	1136700	141850	8757150
Post Graduate	Units	4	6	-	10
	GMI	511121	879445	-	1390566
	NMI	135000	364500	-	499500

Source: same as Table IV.10

Relationship between age and income: In services sector, the correlation between age and income is shown in Table IV.24 and it is found that there is a high degree of correlation in the age groups of 20-30, 40-50 and 50 years and above with GMI which is $r = 0.95$, $r = 0.90$ and $r = 0.95$ respectively whereas correlation between the age group 30-40 and GMI is showing a moderate degree of positive relationship at $r = 0.48$. The correlation between age and NMI shows a high degree of positive relationship in the age groups of 20-30, 40-50 and 50 years and above with NMI which is $r = 0.94$, $r = 0.99$ and $r = 0.94$ respectively whereas the correlation between the age group 30-40 and NMI is showing a very low degree of negative relationship which is $r = 5.0855E-05$.

Table IV.24: Age and income (in Rs.) in services sector

Age		Dimapur	Kohima	Phek	Total
	Units	10	4	6	20
	GMI	2962400	154266	171640	3288306
20-30	NMI	2014600	100000	78500	2193100
	Units	17	31	11	59
	GMI	4377721	3090026	305400	7773147
30-40	NMI	3174500	836559	117000	4128059
	Units	33	27	16	76
	GMI	2426231	908958	428620	3763809
40-50	NMI	1146500	943500	192950	2282950
	Units	41	26	11	78
	GMI	7691911	2037464	428140	10157515
50+	NMI	3490000	807500	210000	4507500

Source: same as Table IV.10

CHAPTER V

CONCLUSION AND SUMMARY OF FINDINGS

MSMEs have many potential in empowering entrepreneurs and in the process can transform society. MSMEs offer avenues where it can operate at home as well and earn income. New business ventures have a number of critical roles to play in supporting innovation. There are many reasons people enter into business even though they face economic, technical, financial and managerial difficulties. Many have entered MSMEs without having prior information, experience and knowledge regarding the functioning and business atmosphere which has slowed down the development process. MSMEs have the ability to create environment for successful entrepreneurs as well as for new comers. As such MSMEs has become a fast catching trend for many.

Nagaland State has envisioned making her economy vibrant by 2020 as enshrined in Nagaland state Vision 2020 which includes elements like enhance human capabilities to promote equitable growth covering all sections of people and regions of the State; increase rural incomes through greater viability of agriculture and allied activities; focus on job-oriented growth through concomitant skill development of the workforce; achieve a sustainable and orderly process of industrialisation and urbanisation; improve energy availability and develop infrastructure to boost productive potential of economy; ensure sustainability of the State environment and natural resources; etc.

Nagaland State Industrial Policy-2000 (Revised-2004) has highlighted to facilitate rapid and sustained industrial development through enhances investment, an investor friendly environment, provision of infrastructure and institutional support, attractive incentive package and optimum utilisation of existing resources in order to gainfully

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exploit emerging opportunities in the national and international markets and generate substantial income and employment avenues for the people of Nagaland. Some of the main objectives are to bring rapid industrialisation, create gainful employment, develop human resources through trainings, develop industrial infrastructure, develop marketing facilities, develop village and Small Scale Service and Business Enterprises (SSSBE), etc.

Nagaland government has also identified thrust areas for furthering industrial development which includes food processing industries, tourism industry, agro-based industries, mineral-based industries, handloom and handicrafts, sericulture, floriculture, horticulture, small scale service and business enterprise, etc.

Incentives and packages also includes power subsidy contribution to feasibility, subsidy on drawal of power Line, manpower subsidy, assistance for quality control measures special incentive for 100 percent export-oriented units, exemption of stamp duty, 15 percent price preference and exemption of earnest money on government store purchase programme, etc. The Central Government has also provided special incentives under New Industrial Policy for North Eastern Region which includes 15 percent capital investment subsidy on plant & machinery subject to a maximum of Rs. 30.00 lakh, 90 percent Transportation Subsidy, 3 percent interest subsidy on working capital loan and 10 years tax holiday for excise duty and income tax.

Some of the schemes and programmes that are under implementation in Nagaland are summarized below.

Industrial Growth Centre (IGC) – Dimapur, is commissioned in 2006 with the objective to promote enterprises. There are 4 Industrial Estates and 7 Industrial Growth Centre in Nagaland. The North Eastern Industrial Consultants Ltd (NECON) promoted

by All India Financial Institutions, banks and SIDCs including Nagaland Industrial Development Corporation (NIDC) is providing consultancy assistance and professional services to all classes of entrepreneurs. With its Head Office in Agartala, NECON has a Branch Office at Dimapur and Kohima in Nagaland.

To facilitate industrial development, Nagaland has identified Industrial Zones where industrial units set up will be eligible for the package of incentives provided under the industrial policy. They are 1. Bhandari Sub-division, 2. Dimapur Sub-division 3. Ghathashi area, 4. Industrial Growth Centre, Longleng , 5. Industrial Growth Centre, Noklak, 6. Mini Industrial Growth Centre, Viswema, 7. New Industrial Growth Centre, Ganeshnagar, 8. Tizit Sub-division, 9. Wazeho Area, 10. Tuli area, 11. Kiphire sub-division, 12. Longnak/Longtho area.

Nagaland Mini Tool Room and Training Centre (NMTTC) – Dimapur, a centrally sponsored scheme by GOI, Ministry of Micro, Small and Medium Enterprises, Development Commissioner is functioning with the objective to provide opportunities for self employment to the youth by imparting state of the art skill training.

Prime Minister's Employment Generation Programme (PMEGP) managed by Ministry of Micro Small and Medium Enterprises (MoMSME) and implemented by Khadi and Village Industries Commission (KVIC) at the national level and at state level by Directorate of Khadi and Village Industries Boards (KVIBs) and District Industries Centres (DICs) and identified scheduled commercial banks. The main objective of PMEGP is to generate employment opportunities in rural and urban areas of the country by setting up new self-employment ventures/projects/micro enterprises. Under KVIC available schemes include work-shed scheme for khadi artisans, programme for promotion of village industries cluster with a financial assistance of Rs. 5 lakhs to Rs. 25

lakhs, scheme for Product Development, Design Intervention and Packaging (PRODIP), etc.

Under the Ministry of Commerce, schemes like Export Development Fund (EDF) and Assistance to States for Development of Export Infrastructure and Other Allied Activities (ASIDE) for NER to assist specific activities are implemented. In Nagaland, it has authorised NIDC as the implementing agency.

Under Ministry of Textiles schemes includes Integrated Handloom Development Scheme (IHDS) which is a centrally sponsored scheme, Babasaheb Ambedkar Hastshilp Vikas Yojana (AHVY), Design and Technology Upgradation Scheme and financial assistance for handicrafts, etc.

Under the Ministry of Food Processing Industries (MoFPI) schemes includes creation of infrastructure, Entrepreneurship Development Programme (EDP), Food Processing Training Centre (FPTC), scheme for setting up/ upgradation of food testing laboratories, etc.

Under the state government, departments like Horticulture, Sericulture, Veterinary and Animal Husbandry, Tourism, Land Resources, Fisheries, Rural Development, etc. are also playing an important role in the development and growth of MSMEs.

Some of the financial institutions for assistance to enterprises are National Scheduled Tribes Finance and Development Corporation (NSTFDC), National Minorities Development and Finance Corporation (NMDFC), Small Industries Development Bank of India (SIDBI), etc.

Under the government initiatives for creating self employment in the state, institutions are catering to the needs of the youth where drop-out students can undergo training under different technical trades.

Table V.1: Number of trainees undergoing training in Industrial Training Institutes (ITIs)

Year	No. of Trainees	Annual Growth Rate
2010-11	578	-
2011-12	558	-3.46
2012-13	676	21.15
2013-14	825	22.04
2014-15	840	1.82

Source: Statistical handbook of Nagaland, 2013,2014 & 2015

As shown in the above table, persons undergoing training has increased from 578 in 2010-11 to 840 in 2014-15 and the annual growth rate shows that during 2011-12, there is a negative growth rate of -3.46 percent. In the subsequent years that is, 2012-13 and 2013-14, growth rate is 21.15 percent and 22.04 percent respectively and in 2014-15, the growth rate is 1.82 percent. The compound annual growth rate is 29.07 percent from the period 2010-11 to 2014-15.

Table V.2: Number trainees trained in Nagaland Mini Tool Room and Training Centre (NMTTC)

Year	No. of trainees			
	Long-term	Annual Growth Rate	Short-term	Annual Growth Rate
2010-11	112	-	44	-
2011-12	142	26.79	71	61.36
2012-13	123	-13.38	337	374.65
2013-14	130	5.69	420	24.63
2014-15	123	-5.38	821	95.48

Source: AAP of 2012-13, 2013-14 & 2014-15, Department of Industries and Commerce, Government of Nagaland

Under NMTTC, courses are broadly categorised into two viz. long-term course and short-term course. In long-term category, 112 persons are undergoing training during 2010-11, which increases to 142 in 2011-12 but during 2014-15, the number reduces to

123. Annual growth rate shows that during 2011-12, there is a positive growth rate of 26.79 percent but in 2014-15, there is a negative growth rate of -5.38 percent. The compound annual growth rate for number of trainees under long-term course from 2010-11 t0 2014-15 is 21.96 percent. In short-term category, 44 persons are undergoing training during 2010-11 and in 2014-15, the number has increased to 821 persons and the annual growth rate shows increasing trend from 61.36 percent in 2011-12 to 95.48 percent in 2014-15. The compound annual growth rate for number of trainees under short-term course from 2010-11 t0 2014-15 is 373.18 percent

Table V.3: Number of beneficiaries under Prime Minister Employment Generation Programme (PMEGP)

Year	No. of beneficiaries	Annual Growth Rate
2010-11	204	-
2011-12	204	0
2012-13	182	-10.78
2013-14	277	52.20
2014-15	606	118.77

Source: Statistical handbook of Nagaland, 2013, 2014 &2015

PMEGP is a remarkable programme in empowering youth for self employment in the country and in Nagaland as is shown in table VI.9, there are 204 beneficiaries which has increases to 277 in 2013-14 and further to 606 in 2014-15. The annual growth rate in 2012-13 is negative while in 2013-14, the growth rate has increase by 52.20 percent and further by 118.77 percent in 2014-15 and the compound annual growth rate for the given period is 59.41 percent.

I: Summary of Findings

1.   Micro enterprises dominates MSME sector with 70.75 percent of MSME sector. Small enterprises account 25.79 percent while medium enterprises accounts 3.46 percent of MSME sector which reveals the dominance of micro enterprises in the state.

2. The study finds that 26.73 percent of the enterprises in the MSME sector are engaged in manufacturing, while 73.27 percent of the enterprises are engaged in services sector.

3. Over the 35 years period, the Compound Annual Growth Rate (CAGR) is 12.59 percent.   In the manufacturing the CAGR for the period from 1980 to 2014 is 13.53 percent and in the services sector the CAGR from 1980 to 2014 is 12.31 percent.

4. It is found that 90.57 percent of the MSMEs are sole proprietorship. In manufacturing, 88.24 percent of the enterprises are sole proprietor and in Dimapur, Kohima and Phek, sole proprietorship accounts 97.44 percent, 84.85 percent and 69.23 percent respectively. In services sector, 91.42 percent of the enterprises are sole proprietor and it accounts 88.12 percent, 92.05 percent and 97.73 percent in Dimapur, Kohima and Phek respectively.

5. In terms of ownership by gender in MSME, 79.87 percent of the enterprises are owned by males, 11.01 percent of the enterprises are owned by females and 9.12 percent of the enterprises are owned by 'others'.

6. According to the educational status of entrepreneurs, 24.21 percent of the entrepreneurs are below matric, 27.36 percent are matriculate, 15.41 percent are 10 +2 level, 27.99 percent are graduate and 5.03 percent were post graduate.

7. Ownership of enterprises by age indicates that 24 units (7.55 percent) are run by entrepreneurs in the age group of 20-30 years, 73 units (22.96 percent) by 30-40 years, 108 units (33.96 percent) by 40-50 years and 113 units (35.53 percent) by 50 years of age and above.

8. There were only 7.23 percent of trained entrepreneurs while the rest 92.77 percent have no prior taining to start or run their enterprises. It is also found that only 18.24 percent of the entrepreneurs have other sources of income other than their present enterprise while the remaining 81.76 percent solely depends on a single source of income.

9. Overall regression analysis of NMI with cost variables in manufacturing sector shows that variable like electricity, raw material and miscellaneous have a positive effect on NMI which implies that cost on these variables brings additional profit to entrepreneurs. On the other hand, variables like wages, rent and transportation have a negative effect on NMI. That is a 10 percent increase in the independent variables will increase NMI by 1.7 percent (electricity-X_3), 0.6 percent (raw material-X_4), 5.5 percent (miscellaneous-X_6) and is expected to decrease NMI by 0.1 percent (wages-X_1), 0.2 percent (rent-X_2) and 0.7 percent (transportation-X_5).

Likewise, variables like electricity, raw material, transportation and miscellaneous in Dimapur, variables like wages, rent, electricity, raw material, and miscellaneous in Kohima and variables like rent, electricity, raw material and transportation in Phek has positive effect on NMI indicating that additional cost on these

variables increases NMI. On the other hand, variables like wages and rent in Dimapur, transportation in Kohima and wages and miscellaneous in Phek show negative effect on NMI indicating that additional cost on these variables for the towns respectively is not desirable or favourable. Here, the given variables explained 57 percent, 80 percent, 60 percent and 97 percent of the variation in NMI with respect to Overall, Dimapur, Kohima and Phek.

10. In manufacturing sector, the Cobb-Douglas production equation shows that the output elasticity of labour (β_1) and capital (β_2) is 0.16 and 0.77 respectively which reveals that if labour input is increased by 10 percent, output will increase by an estimated 1.6 percent holding capital input constant and holding labour constant, 10 percent increase in capital would increase 7.7 percent of output. There is decreasing returns to scale since $\beta_1 + \beta_2 = 0.93$ is less than 1 and given the two inputs, additional capital input will be preferred to labour input because output elasticity of capital is higher than the output elasticity of labour. It is found that manufacturing sector is operating under decreasing return to scale.

In micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.14 and 0.77 respectively which exhibits a decreasing return to scale. In small enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.19 and 0.71 respectively which indicates a decreasing return to scale. The elasticity of labour is higher in small enterprise when compared with micro enterprise and elasticity of capital is higher in micro enterprise when compared with the small enterprise.

The output elasticity of capital is higher than the output elasticity of labour in all respect. Thus, capital plays a more important role in the additional output and hence, concludes that manufacturing sector is capital intensive.

11. In Dimapur, the output elasticity of labour (β_1) and capital (β_2) is 0.16 and 0.75 respectively showing a decreasing return to scale. The output elasticity of labour (β_1) and capital (β_2) in micro enterprise and small enterprise is less than 1 indicating decreasing returns to scale.

Likewise, the results of the output elasticity of labour (β_1) and capital (β_2) inforest-based enterprise, mineral-based enterprise and agro-based enterprise is less than unity exhibiting decreasing returns to scale.

12. In Kohima, the output elasticity of labour (β_1) and capital (β_2) is 0.17 and 0.77 respectively showing a decreasing return to scale. In micro enterprise as well as in small enterprise, the output elasticity of labour (β_1) and capital (β_2) is less than 1 which indicates decreasing returns to scale.

Similarly, resource-based result shows that in forest-based enterprise and mineral-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is less than unity and hence, there is decreasing returns to scale. Interestingly, in agro-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is greater than 1 and thus, exhibiting increasing returns to scale.

13. In Phek, the output elasticity of labour (β_1) and capital (β_2) is 0.26 and 0.72 respectively showing a decreasing return to scale. Interestingly, in micro enterprise, the output elasticity of labour (β_1) and capital (β_2) is greater unity and therefore there is an increasing return to scale. Resource-based result shows that in forest-based enterprise, the output elasticity of labour (β_1) and capital (β_2) is 0.12 and 0.77 respectively which indicates decreasing returns to scale. Contrarily, in agro-based enterprise, the output

elasticity of labour (β_1) and capital (β_2) is 0.34 and 0.67 respectively exhibiting increasing returns to scale.

14. The regression equation of independent variables with respect to NMI show that wages and electricity posit a positive effect on the dependent variable while rent and miscellaneous depicts a negative effect on the dependent variable.

Likewise, in Dimapur wages and electricity have a positive effect on the dependent variable while rent and miscellaneous have a negative effect on the dependent variable. In Kohima, wages, rent and electricity have a positive effect on the dependent variable while miscellaneous have a negative effect on the dependent variable. In Phek, all the variables show a positive effect on the dependent variable. The coefficient of determination is better explained by the given variables in Kohima compared with Dimapur and Phek for the variation in the dependent variable.

15. In services sector, the output elasticity of labour (β_1) and capital (β_2) is 0.58 and 0.33 respectively. This shows that if labour input is increased by 10 percent, output will increase by an estimated 5.8 percent holding capital input constant and holding labour constant, 10 percent increase in capital will increase output by 3.3 percent. This results exhibits that there is decreasing returns to scale since $\beta_1 + \beta_2 = 0.91$ which is less than unity and given the two inputs, additional labour input will be preferred to capital input because output elasticity of labour is higher than the output elasticity of capital. In services sector, contrary to the manufacturing sector, the labour productivity is higher than the capital productivity.

In micro enterprise, small enterprise and medium enterprise, the output elasticity of labour (β_1) and the output elasticity of capital (β_2) is less than unity and hence, are subject to decreasing returns to scale. The elasticity of labour in medium enterprise is

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higher than micro enterprise and small enterprise while the elasticity of capital in micro enterprise is higher than the small enterprise and medium enterprise.

In services sector, the output elasticity of labour is higher than the output elasticity of capital. Thus, labour plays a more important role in the additional output and hence, is concluded that services sector is labour intensive.

16. Activity-wise result in services sector shows that in shops, transport and workshops, the output elasticity of labour (β_1) and capital (β_2) is less than unity and therefore, there exists decreasing returns to scale. But in hotels, the output elasticity of labour (β_1) and capital (β_2) is greater than unity and therefore, the sector is operating under increasing returns to scale.

17. In Dimapur, the output elasticity of labour (β_1) and capital (β_2) is 0.57 and 0.38 respectively and since $\beta_1 + \beta_2 = 0.95$ is less than 1, there is decreasing returns to scale. There is also decreasing returns to scale in micro enterprise, as well as small enterprise and medium enterprise because the output elasticity of labour (β_1) and capital (β_2) is less than unity. Similarly, in activity-wise, the results of the output elasticity of labour (β_1) and capital (β_2) in shops, transport and workshops also shows that they operating under decreasing returns to scale, while in hotels, the output elasticity of labour (β_1) and capital (β_2) is 1.39 and 0.01 respectively indicating increasing returns to scale.

18. In Kohima, services sector operate under decreasing returns to scale since $\beta_1 + \beta_2 = 0.81$ which is less than 1. Similarly, in micro enterprise, small enterprise and in medium enterprise, since the output elasticity of labour (β_1) and capital (β_2) less than unity, they are also operating under decreasing returns to scale. Likewise, shops, transport, workshops and hotels are also operating under the same condition of decreasing returns to scale.

19. In Phek, the output elasticity of labour (β_1) and capital (β_2) is 0.37 and 0.36 respectively showing that there is decreasing returns to scale since $\beta_1 + \beta_2 = 0.73$ which is less than 1. The micro enterprise also operates under decreasing returns to scale. Likewise in shops, there is decreasing returns to scale while in transport and workshops, there is increasing returns to scale. This shows that micro enterprise's result output has greatly affected the functioning of services sector in Phek.

20. The study finds that MSMEs operate under decreasing to return to scale because $\beta_1 + \beta_2$ is less than 1. It is also found that the labour elasticity at 0.50 is slightly higher than the elasticity of capital at 0.41.

In micro, small and medium enterprises, the elasticity shows a decreasing return to scale. Again in micro and medium enterprises, elasticity of labour is higher than elasticity of capital, whereas in small enterprises, elasticity of capital is higher than elasticity of labour.

21. The correlation between manufacturing sector and employment is found to be $r = 0.84$ which indicates that there is a high degree of positive relationship. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The b coefficient is positive, therefore, there is a positive relationship between manufacturing sector and employment. In micro enterprises, the correlation coefficient is $r = 0.88$ indicating a high degree of positive relation and in small enterprises $r = 0.97$ indicating a very high degree of positive correlation.

Town-wise results show that in Dimapur, correlation between manufacturing sector and employment is found to be $r = 0.91$ which indicates that there is high degree of positive relationship and since the estimated t-value is lower than the table value, it is not

significant. The b coefficient is positive, therefore, there is a positive relationship between units and employment. In Kohima, correlation between manufacturing sector and employment is found to be r = 0.30 indicating that there is a moderate degree of positive relationship. The estimated t-value is lower than the table value, it is not significant, but since the b coefficient is positive, there is a positive relationship between units and employment. In Phek, correlation between manufacturing sector and employment is found to be r = -0.65 which indicates that there is moderate degree of negative relationship. The calculated t-value is lower than the table value, it is not statistically significant. The b value is negative (-1.89) which means that the sector has relatively low impact on employment generation.

22. Looking at resource-based activity, the correlation with employment is found to be r = 0.73 indicating a moderate degree of positive relationship. In mineral based activity, correlation with employment is found to be r = +0.78 which indicates that there is a high degree of positive relationship. Likewise, in agro based activity, correlation with employment is found to be r=-0.50 showing a moderate degree of negative relationship. Of the three activities, the strength of relationship with employment is higher in mineral-based enterprises.

23. The correlation between services sector and employment is r = 0.70 which indicates that there is a moderate degree of positive. In category-wise, correlation between micro enterprises and employment is r = 0.79 indicating that there is a high degree of positive relationship. In small enterprises, correlation with employment is r = 0.97 demonstrating that there is a high degree of positive relationship. In medium enterprises, correlation with employment is r = 0.99 which indicates that there is a high degree of positive relationship.

In town-wise results, the correlation between services sector and employment in Dimapur is r = 0.98 which indicates that there is a high degree of positive relationship between services sector and employment. In contrary, the correlation between services sector and employment in Kohima is found to be negative (r = -0.13) showing a low degree of negative relationship. Similarly, in Phek, the correlation between services sector and employment is r = 0.88 indicating that there is a high degree of positive relationship.

24. In terms of activity-wise in services sector, the correlation employment with shops, transport and workshops is found to be r = 0.88, r = 0.90 and r = 0.99 respectively demonstrating a high degree of positive relationship.

25. The correlation of MSMEs with employment is r = 0.85 indicating a high degree of positive relationship which will mean that as MSMEs increases, employment will also increase. Hypothesis 1 which state MSMEs have a positive impact on employment and income is accepted because the correlation coefficients in all the categories are higher than the critical value (0.113) and is statistically significant.

26. The correlation between manufacturing sector and NMI is found to be r = 0.99 which indicates that there is a high degree of positive relationship. It means as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is significant since the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.99 indicating that 99 percent of the variation on NMI is caused by the indendenpent variable (units).

In Dimapur, the correlation between manufacturing sector and NMI is found to be r = 0.95 which indicates that there is a high degree of positive relationship and the estimated t-value is 2.88 which shows that it is insignificant. The b coefficient is positive,

therefore, there is a positive relationship between units and NMI. The R^2 is 0.89 which implies that 89 percent of the variations on NMI are explained by the units.

In Kohima, the coefficient of correlation between manufacturing sector and NMI is found to be r = 0.67 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 0.91 which is statistically insignificant. Since b value is positive, manufacturing sector and NMI are related. The coefficient of determination is 0.45 which indicates that only 45 percent of the variation on NMI is explained by the independent variable (units).

Likewise, in Phek, the correlation between manufacturing sector and NMI is found to be r = -0.64 which indicates that there is a moderate degree of negative relationship and the calculated t-value is -0.84 which is not statistically significant. The b value is negative which means that the sector has relatively low impact on NMI generation. The R^2 = 0.41 which indicates that 41 percent of the variation on NMI is explained by the number of units.

27. In terms of resource-based, the correlation between forest-based enterprises and net income is found to be r = 0.95 indicating a high degree of positive relationship. The correlation between mineral-based enterprises and net income is found to be r = 0.98 indicating a high degree of positive relationship. The correlation between agro-based enterprises and net income is found to be r = 0.55 showing a moderate degree of positive relationship.

28. The coefficient of correlation between net income and different levels of education in the manufacturing sector shows that there is a moderate degree of positive relationship in the category of below matric, matriculate and 10+2 level with NMI at r = 0.58, r = 0.64 and r = 0.73 respectively while in graduate there is a high degree of

positive relationship which shows r = 0.91 indicating that higher education has better impact on NMI.

29. In the manufacturing sector, the correlation between age and net income is shown shows a high degree of positive relationship in the age groups of 40-50 years and 50 years and above with NMI which is r = 0.99 and r = 0.81 respectively whereas correlation between the age group 30-40 years and NMI is r = -0.28 representing a moderate degree of negative relationship.

30. The correlation between services sector and NMI is found to be r = 0.73 which indicates that there is a moderate degree of positive. It means that as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is statistically significant at 5 percent since the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.53 indicating that 53 percent of the variation on NMI is caused by change in units.

The correlation between micro enterprises and net income is r = 0.95 indicating a high degree of positive relationship. The correlation between small enterprises and net income is r = 0.99 exhibiting a high degree of positive relationship. The correlation between medium enterprises and net income is r = -0.98 indicating a high degree of negative relationship.

In Dimapur, the correlation between services sector and NMI is found to be r = 0.90 which indicates that there is a high degree of positive relationship and the estimated t-value is lower than the table value, it is statistically insignificant. The b coefficient is positive, therefore, there is a positive relationship between units and NMI. The R^2 is 0.80 which implies that 80 percent of the variations on NMI are explained by the units.

In Kohima, the coefficient of correlation between services sector and NMI is found to be r = 0.59 which indicates that there is a moderate degree of positive relationship and the calculated t-value is 1.04 which is statistically insignificant. Since b value is positive, services sector and NMI are related. The coefficient of determination is 0.35 which indicates that only 35 percent of the variation on NMI is explained by the independent variable (units).

Likewise, in Phek, the correlation between services sector and NMI is found to be r = 0.9 which indicates that there is a high degree of positive relationship and the calculated t-value is 3.39 which is not statistically significant. The $R^2 = 0.92$ which indicates that 92 percent of the variation on NMI is explained by the number of units.

31. The correlation between shops and NMI is found to be r = 0.88 which indicates that there is a high degree of positive relationship. It means that as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.77 indicating that 77 percent of the variation on NMI is caused by number of units.

The correlation between transport and NMI is found to be r = 0.30 which indicates that there is a high degree of positive relationship. It implies that as enterprises increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is not significant since the estimated t-value is lower than the table value. The coefficient of determination or R^2 is 0.09 indicating that only 9 percent of the variation in the NMI is caused by number of units.

The correlation between workshops and NMI is found to be r = 94 which indicates that there is a high degree of positive relationship. It means that as enterprises

increases, NMI also increases. At the level of significance alpha=0.05, the result shows that correlation is significant at 1 percent level because the estimated t-value is higher than the table value. The coefficient of determination or R^2 is 0.89 indicating that 89 percent of the variation in the NMI is caused by number of units.

32. The correlation results between net income and different levels of education in services sector shows that there is a low degree of positive correlation with below matric which is r = 0.21, while in matriculate, 10+2 and graduate there is a high degree of positive relationship with GMI at r = 0.75, r = 0.85 and r = 0.89 respectively indicating that higher education is bringing higher income.

33. In services sector, the correlation between age and net income shows a high degree of positive relationship in the age groups of 20-30, 40-50 and 50 years and above with NMI which is r = 0.94, r = 0.99 and r = 0.94 respectively whereas the correlation between the age group 30-40 and NMI is showing a very low degree of negative relationship which is r = 5.0855E-05.

34. MSMEs correlation with GMI is r = 0.57 indicating a moderate degree of positive relationship and MSMEs with NMI is r = 0.83 showing a high degree of positive relationship. Hypothesis 1 which state MSMEs have a positive impact on employment and income is accepted because the correlation coefficients in all the categories are higher than the critical value (0.113) and is statistically significant.

II: Constraints and suggestions

The performance of the MSMEs depends on both internal and external factors and these factors may include technology, quality of human resources, availability of finance, managerial talent, government policy, easy access to market, availability of raw materials, connectivity (communication and transportation), natural factors, etc. These

factors have a great influence in determining the productivity of the enterprises and also their survival. No doubt, the MSMEs in Nagaland are able to generate income and employment, but in their business ventures, they faced with numerous challenges from internal and external factors. Below are some of the constraints and suggestions which the entrepreneurs have highlighted.

II.1: Manufacturing sector

Finance is one of the crucial factors that determine entrepreneur's ability to progress. There are many obstacles in getting financial assistance from the right source at a right time. Financial institutions are reluctant to finance new comers and budding entrepreneurs and have to go through certain procedures which are often not the case in availing loans. The difficulty associated in obtaining formal financial assistance is also because entrepreneurs are unable to comply with the procedures and often fail to provide necessary undertakings. Government on the other hand is not providing the required assistance though there are many flagship schemes which are implemented. In this situation, entrepreneurs resort to private money lenders which have negative impact on the growth of enterprises due to the very fact that they charge very high rate of interest. Sources of finance are also very limited for expansion of business.

Marketing is another problem that is faced by entrepreneurs since many of the goods are perishable like fruits. They have to go for distress sale with low returns since the goods are very seasonal and there are no proper storage facilities. Apart from distress sale of products they also have to sell their products on credit. The credit basis has put entrepreneurs into difficult situations as they have to struggle for working capital to keep

their business in operation. Marketing facilities and access to markets are another problems which reduces the growth of these sector.

Management is another important aspect for the successful running of business and there are a number of problems attached to this. Some of the problems are like hard to get skilled and trained labour, unable to keep regular worker or cannot keep good number of workers since some activities are seasonal, etc. In certain case, honest workers and professional workers are limited and at the same time not getting long term staff are some constraints of labour management.

Raw material is an important factor of production for producing units and its easy access and quality raw materials are essential. Ever increasing prices of raw materials is becoming one of the major problems culminated with low quality and shortage. In forest-based enterprises, to feed the ever increasing demand, raw materials have to be procured from other state which increases transport and labour cost thereby reducing profits.

Erratic power supply is also another factor that is hampering the smooth functioning of the business and added to the cost of running the enterprise while arranging for alternative power. Some other problems like deplorable road conditions, credit by customers, unregulated markets, etc. are also very prominent in adding to the woos of the entrepreneurs.

II.2: Services Sector

There is difficulty in obtaining financial help from the financial institutions and even if the entrepreneurs have access to it there are procedural delays to get loans. There is another problem like credit by the customers and their inability to pay them in time and

even to the extent of failing to pay. This results in weakening the financial position of the entrepreneurs and leading them to closure.

Lack of management skill and motivation is another pressing problem faced by MSME in services sector. There is also limitation of getting trained employees honest, helpers and long term staffs. Since there is difficulty in getting trained and skilled employees, those who have more than one business and are also dependent on other source of income have no enough time to look after their businesses.

Unwanted taxes in the form of multiple taxes are reducing the enthusiasm of the entrepreneurs in delivering better services to the people. There are also problems like irregular power supply, poor road conditions, lack of proper storage facilities, more competition added by lack of skilled and trained staff, etc, which act as a constraint to the growth of MSMEs. There is another problem like customers not paying properly for the works done. Location is also a problem for some certain businesses.

II.3: Suggestions of the entrepreneurs

Some of the suggestions of entrepreneurs for improving the condition of MSMEs in Nagaland are summarised below:

Entrepreneurial education should be included in school curriculums to create awareness on unemployment and importance of entrepreneurship. Training should focus on personal development, business development and entrepreneurship skill development. This will help individuals to know basic marketing skill and management skill.

Formal financial institutions and government should do spot verification on probable new entry of entrepreneurs for financial assistance and also on the existing enterprises for expansion and upgradation. Enterprises which have the prospect of

furthering the benefits of the economy should be looked into with utmost priority and sincerity on the part of the government. Strict follow-up programmes and inspection should be done to keep the entrepreneurs alert and focussed in their functioning.

Simplification of procedural formalities for prospective entrepreneurs by the banks will be an added advantage in availing credit.

Random selection of beneficiaries at the grass root level and with the concern authority should be checked so as to select viable ventures and which can bring benefits in the long-run.

Government should also ensure that power supply is not disrupted as consumption of electricity reflects the capabilities of manufacturing enterprises.

Another important factor is roads which need immediate effort. The government should see that the works are executed as per the specified standard and should also blacklisted agencies which are not maintaining the prescribed norms. This action will ensure the pace of work progress and also the quality of the work.

Entrepreneurs should be given platforms where they can expose their innovative ideas. Infrastructural support like ware-housing, proper storage, water harvesting will greatly improve the entrepreneur's ability to progress faster.

Regular supply of inputs at reasonable rates will ensure the spirit of competitive strength for MSMEs. Marketing assistance to the producing units at remunerative prices and information system should be strengthened.

Advertisement, demonstration and motivational programmes will be helpful in acquiring and updating of knowledge which can influence the entrepreneurs to leap forward.

Since medium enterprises are still very negligible in the state, private public partnership can be feasible option for consideration.

Market regulations should be implemented in both organised and unorganised sector. This will further ensure maintenance of proper data for records and improve policy maker's decision in the long-run.

To conclude, MSME play a crucial role in the process of economic development, employment generation, encourage entrepreneurship, and promote equitable distribution of national income among the masses, reducing poverty, increasing income and assets creation. There are many schemes and programmes implemented by the government which needs to be properly channelized and prioritised in line with the industrial policy for realisation of the goals and objectives. Though there are numerous constraints that hinders the development of MSMEs, to take advantage of the various opportunities, it necessarily need knowledge and access to new technology, innovations, adequate financial aid, development of Research and Development and adaptability to the changing trends in their respective enterprises. To achieve this goal, government as well as individual entrepreneur's role should not be overlooked and one alone cannot bring about a desired goal.

Appendices

Appendix IV.1: Category-wise distribution of employment

Category	Units	Employment		Total	Avg.
		Male	Female		
Dimapur					
Micro enterprise	28 (71.79)	47 (85.45)	8 (14.55)	55 (16.32)	1.96
Small enterprise	11 (28.21)	195 (69.15)	87 (30.85)	282(83.68)	25.64
Total	**39 (45.88)**	**242 (71.81)**	**95 (28.19)**	**337 (65.95)**	**8.64**
Kohima					
Micro enterprise	27 (81.82)	38 (50.00)	38 (50.00)	76(60.80)	2.81
Small enterprise	5 (15.15)	45 (100.00)	-	45 (36.00)	9
Medium enterprise	1 (3.03)	2 (50.00)	2 (50.00)	4 (3.20)	4
Total	**33 (38.82)**	**85 (68.00)**	**40 (32.00)**	**125 (24.46)**	**3.79**
Phek					
Micro enterprise	11 (84.62)	17 (62.96)	10 (37.04)	27 (55.10)	2.45
Small enterprise	2 (15.38)	20 (90.91)	2 (9.09)	22 (44.90)	11
Total	**13 (15.30)**	**37 (75.51)**	**12 (24.49)**	**49 (9.59)**	**3.77**
Overall					
Micro enterprise	66 (77.64)	104 (65.82)	54 (34.18)	158 30.92)	2.39
Small enterprise	18 (21.18)	260 (74.50)	89 (25.50)	349 68.30)	19.39
Medium enterprise	1 (1.18)	2 (50.00)	2 (50.00)	4 (0.78)	4
Total	**85**	**364 (71.23)**	**147(28.77)**	**511**	**6.01**

Source: Field survey

*Note: * Figure in parenthesis indicates percentage, Emp. = Employment, Avg. = Average*

Appendix IV.2: Resource-based distribution of employment

Resource-based enterprise	Units	Employment			Avg.
		Male	Female	Total	
Dimapur					
Forest-based enterprise	13 (33.33)	43 (100.00)	-	43 (12.76)	3.31
Mineral-based enterprise	17 (43.59)	180 (65.45)	95 (34.55)	275 (81.60)	16.18
Agro-based enterprise	9 (23.08)	19 (100.00)	-	19 (5.64)	2.11
Total	**39 (45.88)**	**242 (71.81)**	**95 (28.19)**	**337 (66)**	**8.64**
Kohima					
Forest-based enterprise	7 (21.21)	10 (24.39)	31(75.61)	41(32.80)	5.86
Mineral-based enterprise	14 (42.42)	69 (100.00)	-	69 (55.20)	4.93
Agro-based enterprise	12 (36.37)	6 (40.00)	9 (60.00)	15 (12.00)	1.25
Total	**33 (38.82)**	**85 (68.00)**	**40 (32.00)**	**125 (24)**	**3.79**
Phek					
Forest-based enterprise	5 (38.46)	6 (60.00)	4 (40.00)	10 (20.41)	2
Mineral-based enterprise	2 (15.39)	22 (100.00)	-	22 (44.90)	11
Agro-based enterprise	6 (46.15)	9 (52.94)	8 (47.06)	17 (34.69)	2.83
Total	**13 (15.30)**	**37 (75.51)**	**12 (24.49)**	**49 (10)**	**3.77**
Overall					
Forest-based enterprise	25 (29.41)	59 (62.77)	35 (37.23)	94 (18.40)	3.76
Mineral-based enterprise	33 (38.82)	271 (74.04)	95 (25.96)	366 (71.62)	11.09
Agro-based enterprise	27 (31.77)	34 (66.67)	17 (33.33)	51 (9.98)	1.89
Total	85	364 (71.23)	147 (28.77)	511	6.01

*Note: * Figure in parenthesis indicates percentage, Emp. = Employment, Avg. = Average*

Appendix IV.3: Town-wise and category-wise distribution of GMI (in Rs.)

Towns	Category	Units	GMI	Average.
Dimapur	Micro enterprise	28 (71.79)	4368077 (35.11)	156002.75
	Small enterprise	11 (28.21)	8073813 (64.89)	733983.00
	Total	**39 (45.88)**	**12441890 (52.91)**	**319022.82**
Kohima	Micro enterprise	27 (81.82)	3995285 (53.27)	147973.52
	Small enterprise	5 (15.15)	3394476 (45.26)	678895.20
	Medium enterprise	1 (3.03)	111000 (1.47)	111000.00
	Total	**33 (38.82)**	**7500761 (31.90)**	**227295.79**
Phek	Micro enterprise	11 (84.62)	991501 (27.75)	90136.46
	Small enterprise	2 (15.38)	2582000 (72.25)	1291000.00
	Total	**13 (15.30)**	**3573501** (15.19)	**274884.69**
Overall	Micro enterprise	66 (77.64)	9354863 (39.78)	141740.35
	Small enterprise	18 (21.18)	14050289 (59.75)	780571.61
	Medium enterprise	1 (1.18)	111000 (0.47)	111000.00
	Total	**85**	**23516152**	**276660.61**

Source: same as table IV.1

* Figure in parenthesis indicates percentage

Appendix IV.4: Town-wise and resource-based distribution of GMI (in Rs.)

Town	Resource-based enterprise	Units	GMI	Average
Dimapur	Forest-based enterprise	13 (33.33)	2937359 (23.61)	225950.70
	Mineral-based enterprise	17 (43.59)	8173239 (65.69)	480778.80
	Agro-based enterprise	9 (23.08)	1331292 (10.70)	147921.30
	Total	**39 (45.88)**	**12441890 (52.91)**	**319023.10**
Kohima	Forest-based enterprise	7 (21.21)	1686000 (22.48)	240857.10
	Mineral-based enterprise	14 (42.42)	5160752 (68.80)	368625.10
	Agro-based enterprise	12 (36.37)	654009 (8.72)	54500.75
	Total	**33 (38.82)**	**7500761 (31.90)**	**227295.80**
Phek	Forest-based enterprise	5 (38.46)	467146 (13.07)	93429.20
	Mineral-based enterprise	2 (15.39)	2582000 (72.25)	1291000.00
	Agro-based enterprise	6 (46.15)	524355 (14.67)	87392.50
	Total	**13 (15.30)**	**3573501 (15.19)**	**274884.70**
Overall	Forest-based enterprise	25 (29.41)	5090505 (21.65)	203620.20
	Mineral-based enterprise	33 (38.82)	15915991 (67.68)	482302.80
	Agro-based enterprise	27 (31.77)	2509656 (10.67)	92950.22
	Total	**85**	**23516152**	**276660.70**

Source: same as table IV.1

Appendix IV.5: Town-wise and category-wise distribution of NMI (in Rs.)

Towns	Category	Units	NMI	Average
Dimapur	Micro enterprise	28 (71.79)	581675 (40.83)	20774.11
	Small enterprise	11 (28.21)	843000 (59.17)	76636.36
	Total	**39 (45.88)**	**1424675 (50.16)**	**36530.13**
Kohima	Micro enterprise	27 (81.82)	698900 (56.87)	25885.19
	Small enterprise	5 (15.15)	480000 (39.06)	96000
	Medium enterprise	1 (3.03)	50000 (4.07)	50000
	Total	**33 (38.82)**	**1228900 (43.26)**	**37239.39**
Phek	Micro enterprise	11 (84.62)	112000 (59.89)	10181.82
	Small enterprise	2 (15.38)	75000 (40.11)	37500
	Total	**13 (15.30)**	**187000 (6.58)**	**14384.62**
Overall	Micro enterprise	66 (77.64)	1392575 (49.02)	21098.71
	Small enterprise	18 (21.18)	1398000 (49.22)	77666.67
	Medium enterprise	1 (1.18)	50000 (1.76)	50000
	Total	**85**	**2840575**	**33418.53**

Source: same as table IV.1

* Figure in parenthesis indicates percentage

Appendix IV.6: Resource-based distribution of NMI (in Rs.)

Towns	Resource-based enterprise	Units	NMI	Average
Dimapur	Forest-based enterprise	13 (33.33)	352500 (24.74)	27115.38
	Mineral based enterprise	17 (43.59)	841675 (59.08)	49510.29
	Agro-based enterprise	9 (23.08)	230500 (16.18)	25611.11
	Total	**39 (45.88)**	**1424675 (50.16)**	**36530.13**
Kohima	Forest-based enterprise	7 (21.21)	209900 (17.08)	29985.71
	Mineral based enterprise	14 (42.42)	863000 (70.23)	61642.86
	Agro-based enterprise	12 (36.37)	156000 (12.69)	13000.00
	Total	**33 (38.82)**	**1228900 (43.26)**	**37239.39**
Phek	Forest-based enterprise	5 (38.46)	48000 (25.67)	9600
	Mineral based enterprise	2 (15.39)	75000 (40.11)	37500
	Agro-based enterprise	6 (46.15)	64000 (34.22)	10666.67
	Total	**13 (15.30)**	**187000 (6.58)**	**14384.62**
Overall	Forest-based enterprise	25 (29.41)	610400 (21.49)	24416
	Mineral based enterprise	33 (38.82)	1779675 (62.65)	53929.55
	Agro-based enterprise	27 (31.77)	450500 (15.86)	16685.19
	Total	**85**	**2840575**	**33418.53**

Source: same as table IV.1

Appendix IV.7: Category-wise distribution of employment (Services sector)

| Category | Units | Employment | | | Avg. |
		Male	Female	Total	
Dimapur					
Micro	53 (52.48)	118 (95.94)	5 (4.06)	123 (20.33)	2.32
Small	44 (43.56)	286 (93.16)	21 (6.84)	307 (50.74)	6.98
Medium	4 (3.96)	142 (81.14)	33 (18.86)	175 (28.93)	43.75
Total	**101 (43.35)**	**546 (90.25)**	**59 (9.75)**	**605 (56.97)**	**5.99**
Kohima					
Micro	65 (73.86)	113 (90.40)	12 (9.60)	125 (32.22)	1.92
Small	17 (19.32)	77 (87.50)	11 (12.50)	88 (22.68)	5.18
Medium	6 (6.82)	112 (64.00)	63 (36.00)	175 (45.10)	29.17
Total	**88 (37.77)**	**302 (77.84)**	**86 (22.16)**	**388 (36.53)**	**4.41**
Phek					
Micro	41 (93.18)	53 (84.13)	10 (15.87)	63 (91.30)	1.54
Small	3 (6.82)	6 (100.00)	-	6 (8.70)	2.00
Total	**44 (18.88)**	**59 (85.51)**	**10 (14.49)**	**69 (6.50)**	**1.57**
Overall					
Micro	159 (68.24)	284 (91.32)	27 (8.68)	311 (29.28)	1.96
Small	64 (27.47)	369 (92.02)	32 (7.98)	401 (37.76)	6.27
Medium	10 (4.29)	254 (72.57)	96 (27.43)	350 (32.96)	35.00
Total	**233**	**907 (85)**	**155 (15)**	**1062**	**4.56**

Source: same as table IV.1

Appendix IV.8: Activity-wise distribution of employment (Services sector)

| Activity | Units | Employment | | | Avg. |
		Male	Female	Total	
Dimapur					
Shops	75 (74.26)	374 (93.73)	25 (6.27)	399 (65.95)	5.32
Transport	12 (11.88)	63 (100.00)	-	63 (10.41)	5.25
Workshops	8 (7.92)	35 (100.00)	-	35 (5.79)	4.38
Hotels	6 (5.94)	74 (68.52)	34 (31.48)	108 (17.85)	18
Total	**101 (43.35)**	**546 (90.25)**	**59 (9.75)**	**605 (56.97)**	**5.99**
Kohima					
Shops	57 (64.77)	75 (83.33)	15 (16.67)	90 (23.20)	1.58
Transport	11 (12.50)	29 (96.67)	1 (3.33)	30 (7.73)	2.73
Workshops	12 (13.64)	81 (98.78)	1 (1.22)	82 (21.13)	6.83
Hotels	8 (9.09)	117 (62.90)	69 (37.10)	186 (47.94)	23.25
Total	**88 (37.77)**	**302 (77.84)**	**86 (22.16)**	**388 (36.53)**	**4.41**
Phek					
Shops	31 (70.45)	29 (74.34)	10 (25.64)	39 (56.52)	1.26
Transport	7 (15.91)	8 (100.00)	-	8 (11.59)	1.14
Workshops	6 (13.64)	22 (100.00)	-	22 (31.88)	3.67
Total	**44 (18.88)**	**59 (85.51)**	**10 (14.49)**	**69 (6.50)**	**6.07**
Overall					
Shops	163 (69.96)	478 (90.53)	50 (9.47)	528 (49.72)	3.24
Transport	30 (12.87)	100 (99.01)	1 (0.99)	101 (9.51)	3.37
Workshops	26 (11.16)	138 (99.28)	1 (0.72)	139 (13.09)	5.35
Hotels	14 (6.01)	191 (64.97)	103 (35.03)	294 (27.68)	21
Total	**233**	**907** (85.40)	**155** (14.60)	**1062**	**4.56**

Source: same as table IV.1

Appendix IV.9:Town-wise and category-wise distribution of GMI (in Rs.) (Services sector)

Towns	Category	Units	GMI	Avg.
Dimapur	Micro enterprise	53 (52.48)	2439646 (13.97)	46031.06
	Small enterprise	44 (43.56)	8263750 (47.33)	187812.50
	Medium enterprise	4 (3.96)	6754867 (38.69)	1688717.00
	Total	**101 (43.35)**	**17458263 (69.88)**	**172854.10**
Kohima	Micro enterprise	65 (73.86)	2385625 (38.54)	36701.92
	Small enterprise	17 (19.32)	1368089 (22.10)	80475.82
	Medium enterprise	6 (6.82)	2437000 (39.36)	406166.7
	Total	**88 (37.77)**	**6190714 (24.78)**	**70349.02**
Phek	Micro enterprise	41 (93.18)	1120960 (84.04)	27340.49
	Small enterprise	3 (6.82)	212840 (15.96)	70946.67
	Total	**44 (18.88)**	**1333800 (5.34)**	**30313.64**
Overall	Micro enterprise	159 (68.24)	5946231(23.80)	37397.68
	Small enterprise	64 (27.47)	9844679 (39.41)	153823.10
	Medium enterprise	12 (4.29)	9191867 (36.79)	765988.90
	Total	**233**	**24982777**	**107222.20**

Source: same as table IV.1

Appendix IV.10: Town-wise and Activity-wise distribution of GMI (in Rs.) (Services sector)

Towns	Activity	Units	GMI	AIVg
Dimapur	Shops	75 (74.26)	11651575 (66.74)	155354.3
	Transport	12 (11.88)	1637500 (9.38)	136458.3
	Workshops	8 (7.92)	409188 (2.34)	51148.5
	Hotels	6 (5.94)	3760000 (21.54)	626666.7
	Total	**101 (43.35)**	**17458263 (69.88)**	**172854.1**
Kohima	Shops	57 (64.77)	2198454 (35.51)	38569.37
	Transport	11 (12.50)	562770 (9.09)	51160.91
	Workshops	12 (13.64)	814204 (13.15)	67850.33
	Hotels	8 (9.09)	2615286 (42.25)	326910.8
	Total	**88 (37.77)**	**6190714 (24.78)**	**70349.02**
Phek	Shops	31 (70.45)	812250 (60.90)	26201.61
	Transport	7 (15.91)	336500 (25.23)	48071.43
	Workshops	6 (13.64)	185050 (13.87)	30841.67
	Total	**44 (18.88)**	**1333800 (5.34)**	**30313.64**
Overall	Shops	163 (69.96)	14662279 (58.69)	89952.63
	Transport	30 (12.87)	2536770 (10.15)	84559
	Workshops	26 (11.16)	1408442 (5.64)	54170.85
	Hotels	14 (6.01)	6375286 (25.52)	455377.6
	Total	**233**	**24982777**	**107222.2**

Source: same as table IV.1

Appendix IV.11: Town-wise and category-wise distribution of NMI (in Rs.) (Services sector)

Towns	Category	Units	NMI	Avg.
Dimapur	Micro enterprise	53 (52.48)	1111600 (11.31)	20973.58
	Small enterprise	44 (43.56)	4014000 (40.85)	91227.27
	Medium enterprise	4 (3.96)	4700000 (47.84)	1175000
	Total	**101 (43.35)**	**9825600 (74.94)**	**97283.17**
Kohima	Micro enterprise	65 (73.86)	1110630 (41.32)	17086.62
	Small enterprise	17 (19.32)	536929 (19.98)	31584.06
	Medium enterprise	6 (6.82)	1040000 (38.70)	173333.3
	Total	**88 (37.77)**	**2687559 (20.50)**	**30540.44**
Phek	Micro enterprise	41 (93.18)	462850 (77.34)	11289.02
	Small enterprise	3 (6.82)	135600 (22.66)	45200
	Total	**44 (18.88)**	**598450 (4.56)**	**13601.14**
Overall	Micro enterprise	159 (68.24)	2685080 (20.48)	16887.3
	Small enterprise	64 (27.47)	4686529 (35.74)	73227.02
	Medium enterprise	12 (4.29)	5740000 (43.78)	478333.3
	Total	**233**	**13111609**	**56273**

Source: same as table IV.1

Appendix IV.12: Town-wise and Activity-wise distribution of NMI (in Rs.) (Services sector)

Towns	Activity	Units	NMI	AIVg
Dimapur	Shops	75 (74.26)	6723100 (68.42)	89641.33
	Transport	12 (11.88)	222500 (2.27)	18541.67
	Workshops	8 (7.92)	130000 (1.32)	16250
	Hotels	6 (5.94)	2750000 (27.99)	458333.3
	Total	**101 (43.35)**	**9825600 (74.94)**	**97283.17**
Kohima	Shops	57 (64.77)	1261700 (46.95)	22135.09
	Transport	11 (12.50)	113930 (4.24)	10357.27
	Workshops	12 (13.64)	181500 (6.75)	15125
	Hotels	8 (9.09)	1130429 (42.06)	141303.6
	Total	**88 (37.77)**	**2687559 (20.50)**	**30540.44**
Phek	Shops	31 (70.45)	400950 (67.00)	12933.87
	Transport	7 (15.91)	157000 (26.23)	22428.57
	Workshops	6 (13.64)	40500 (6.77)	6750
	Total	**44 (18.88)**	**598450 (4.56)**	**13601.14**
Overall	Shops	163 (69.96)	8385750 (63.96)	51446.32
	Transport	30 (12.87)	493430 (3.76)	16447.67
	Workshops	26 (11.16)	352000 (2.68)	13538.46
	Hotels	14 (6.01)	3880429 (29.60)	277173.5
	Total	**233**	**13111609**	**56273**

Source: same as table IV.1

Bibliography

Abor, J and Quartey, P. (2010). Issues in SME Development in Ghana and South Africa. *International Research Journal of Finance and Economics*, issue 39 (2010) © Euro Journals publishing. Inc.

Advani, A. (1997). Industrial Clusters: A Support System for Small and Medium-Sized Enterprises, Private Sector Development. *World Bank Occasional Paper*, No. 32, World Bank, Washington, DC.

Aidis, R. (2005). Institutional Barriers to Small and Medium-Sized Enterprise in Transition Countries. *Small Business Economics*, Vol. 25, No.4, pp 302-318, www.jstor.org. Accessed on 12-02-2016.

Ali, S., Rashid, H., & Khan, M. A. (2014). The role of small and medium enterprises and poverty in Pakistan: An empirical analysis. *Theoretical and Applied Economics*, Vol. XXI, No.4 (593), pp. 67-80.

Anwar Ali Shah G. Syed, Muhammad Muneer Ahmadani, Naved Shaikh, and Faiz Muhammad Shaikh (2012). Impact Analysis of SMEs Sector in Economic Development of Pakistan: A Case of Sindh. *Journal of Asian Business Strategy*, Vol. 2, No.2, pp. 44-53.

Arocena, P., Imanol Nunez ans Mikel Villanueva (2007). The Effect of Enhancing Workers' Employability on Small and Medium Enterprises: Evidence from Spain. *Small Business Economics*, Vol. 29. No. ½, pp. 191-201.

Awan, A. G., Sharif, I., Nadeem, N. & Igbal, A. (2015). Impact of Small & Medium Enterprises on Poverty: A Case Study of Khanewal District-Pakistan, *Journal of Economics and Sustainable Development*, Vol. 6 (3).

Baral S.K (2013). An empirical study on changing face of MSME towards emerging economies in India. *Radix International Journal of Research in Social Sciences*, Vol. 2, Issue 1 January.

Barthwal R. R. (2000). *Industrial Economics*. New Age International (P) Limited, Publishers – New Delhi.

Basem M. Lozi (2008). Small scale industries in the Globalization era: The case of Jordan. *Journals of Business and Public Affairs*, ISSN 1934-7219, vol.2 Issue 1.

Bhatt, N. (2016). Modelling of the Factors Influencing the Implementation of Advance Manufacturing Technologies in MSME. *Global Journal of Enterprise Information System,* Vol. 8, No. 3.

Beck T., Demirguc-Kunt, A. and Levine, R. (2005). SMEs, Growth and Poverty: Cross country evidence, *Journal of Economic Growth*, 10(3), 199-229.

Bekele, E. and Worku, Z. (2008). Factors That Affect The Long-Term Survival of Micro, Small and Medium Enterprises in Ethiopia, *South African Journal Of Economics,* Vol. 76 (3), pp. 548-568.

Bernard, B., Sare, Y. A. & Musah, A. (2014). The Effects of Interest Rate on MSME Financing Decision in Wa Municipality of Ghana*, International Journal of Business, Humanities and Technology,* Vol. 4, No. 4, pp. 81-90.

Birajdar, Shrimant M. (2011). A study of the small scale industries in Economic Development in Kolhapur District. *Golden Research Thoughts*, Vol.1,Issue.V/Nov 2011 pp.1-4.

Bowen, M. K, Morara, M. and Mureithi, S. (2009). Management of Business Challenges Among Small and Micro Enterprises in Nairobi-Kenya. *KCA Journal of Business Management*, Vol. 2(1), pp. 16-31.

Carpio, X. D., Nguyen, H., Pabon, L. & Wang, L. C. (2015). Do Minimum Wages affect Employment? Evidence from the Manufacturing Sector in Indonesia. *IZA Journal of Labor & Development,* https://link.springer.com/content/pdf/10.1186 %2Fs40175-015-0040-8.pdf.

Carree,M. A and Thurik, A. R. (1980). Small Firms and Economic Growth in Europe. *Atlantic Economic Journal*, Vol. 26, Issue 2, pp. 137-146.

Carpenter, R. E. and Petersen, B. C. (2006). Is the Growth of Small Firms Constrained by Internal Finance. *The Review of Economics and Statistics*, Vol. 84 (2).

Caves, R. (1998). Industrial Organization and New Findings on Turnover and Mobility of Firms. *Journal of Economic Literature,* No. 36.

Ciubotariu M. S (2013). The role of Small and Medium Enterprises in the Modern Economy and the importance of IFRS application for SMEs. *The USV Annals of Economics and Public Administration*, Volume 13, Issue 1(17).

Cook P, Nixson F (2000). Finance and small and medium-sized enterprise development, *IDPM, University of Manchester, Finance and Development Research Programme Working Paper Series No 14*.

Das, S. K. (2014). Growth and Prospects of MSMEs in Odisha: An Analytical Approach. *Odisha Review*, pp. 101-110.

Datt, R and Sundaram, K.P.M. (2009). *Indian economy.* S. Chand and Sons publication, New Delhi.

Desai,   Vasanta   (2000).   *The   Dynamics   of   Entrepreneurial   Development   and Management.* Himalaya Publishing House, New Delhi.

Dey, S. K (2014). MSMEs in India: Its Growth and Prospects. *Abhinav National Monthly Refereed Journal of Research in Commerce and Management*, Vol. 3 (8), pp. 26-33.

Dutta, A. and Singh, M.K. (2003). Contribution of Small-Scale Industrial (SSI) Sector in the Indian Economy. *The ICFAI Journal of Applied Economics*, Vol. II (4), pp. 79-94.

Eyo, Clement I.B. (1989). *Public Policy and the Development of Small-Scale Industries in Nigeria: A Policy Analysis Perspective*. Howard University Washington D.C.

Felipe, J. and Adams F. G. (2005). A theory of Production: The Estimation of the Cobb-Douglas Function: A Retrospective View. *Eastern Economic Journal*, Vol. 31, No.3

Ferdman, S. (2007). Eradicating Poverty Through Enterprise: An Israeli Viewpoint, Paper presented to the United Nations, New York.

Fida B.A. (2008). The Role of Small and Medium Enterprises (SMEs) in Economic Development. Enterprise Development, *Free Online Library*.

Fredrick, S. P. (2005, December). The role of SMEs in the reconstruction and development of Africa, *Ghana Club 100 Magazine*,7 Accra. Accessed on 24.04.2018.

Garg, B. (2014). Role of MSMEs in Economic Development, *Research Journali's Journal of Entrepreneurship*, Vol. 2(2).

Garg, Charu C. 1999. Growth of Small Scale Industries in India: Some Policy Issues, Impact of Fiscal Incentives to Small Scale Industries, *National Institute of Public Finance and Policy*, New Delhi.

Geete, V. and Thakur, A. (2012). Growth Evaluation of Indian Small Scale Industries in the Last Two Decades, *v3 Journal of Management*, Vol. 1(1).

Gibson, T and Vaart, H. J. Van Der (2008). *Defining SMEs: A Less Imperfect Way of Defining Small and Medium Enterprises in Developing Countries,* Brookings Global Economy and Developemnt, Washington D C.

Goswami, Priti and Thakur, Yashwant Singh (2015). Grotwth of Entrepreneurship in MSME in Madhya Pradesh, *Asia Pacific Journal of Research*, Vol.1(XXVII), pp. 54-58.

Grossman, G. M. and Helpman, E. (1991). *Innovation and Growth in the Global Economy*, Cambridge, MIT Press.

Gujrati, R (2013). The Role of SME's in the Economic Development, *Masters International Journal of Management Research and Development (MIJMRD)* Volume I, Issue I, November, ISSN: 2347-9043**.**

Hailey, J. (1991). The Small Business Sector in Developing Economies, *SWP 55/91.*

Hall, G. (1995). *Surviving and Prospering in the small firm sector*, London: Routledge.

Heshmati, A. (2001). On the Growth of Micro and Small Firms: Evidence from Sweden, *Small Business Economics*, Vol. 17, No. 3, pp. 213-228, http://www.jstor.org/stable/40229182. Accessed on 12-02-2016.

Hossian, M. S and Islam, A.K.M.N. (2013). Productivity Analysis and Measuring the Returns to Scale of Manufacturing Firms in the South-West Region of Bangladesh, *IOSR Journal of Humanities And Social Science (IOSR-JHSS)* vol.17, no.1, pp. 69-80.

Humphrey, T. M. (1997). Algebraic Production Functions and Uses Before Cobb-Douglas, *Federal Reserve Bank of Richmond Economic Quarterly*, Vol. 83/1, pp. 51-83.

Jasra, J. M. et. al. (2011). Determinants of Business success of Small and Medium Enterprises*, International Journal of Business and Social Science*, Vol. 2 (20), pp. 274-280.

Jaswal, S. S. (2014). Problems and Prospects of Micro, Small and Medium Enterprises (MSMEs) in India, *International Journal of Innovative Research and Studies,* Vol.3, Issue 5, pp. 140-161.

Josheski, D. and Lazarov, D., and Koteski, C. (2011). Cobb-Douglas production function revisited, VAR and VECM analysis and a note on Fischer/Cobb-Douglass paradox, *MPRA (Munich Personal RePEc Archive) Paper No. 33576.* https://mpra.ub.uni-muenchen.de/33576/

Junejo, M. A., Rohra, C. L., & Maitlo, G. M., (2007), Sickness in Small-Scale Industries of Sindh: Causes & Remedies. A Case Study of Larkana Estate Area, Australian Journal of Basic and Applied Sciences, 1(4) pp. 860-865.

Kadam J.J et. al. (2011). A study of Financial Management in Small Scale Industries in India, *International Journal of Exclusive Management Research*, Vol.I issue 3.

Kadiri, I. B. (2012). Small and Medium Scale Enterprises and Employment Generation in Nigeria: The Role of Finance, *Kuwait Chapter of Arabian Journal of Business and Management Review*, Vol. 1, No. 9, pp. 79-93.

Kaliyamoorthy, S. and Parithi, S. (2012). Micro, Small and Medium Enterprises in India-An Analysis, *International Journal of Research in Commerce, Economics and Management*, Vol.2, Issue 8, pp. 49-52.

Kanrar, Susanta (2012). Micro, Small And Medium Enterprises (MSMEs) And Indian Economy: An empirical study on role of MSMEs, *International Journal of Research in Commerce, Economics & Management,* Volume No. 2 Issue No. 5 (May). http://ijrcm.org.in/

Karadag, H (2015). Financial Management Challenges In Small and Medium-Sized Enterprises:A Strategic Management Approach , *Emerging Markets Journal* Vol. 5, No. 1, ISSN 2158-8708 (online), pp. 26-40.

Kasekende, Louis and Opondo, Henry (2003). Financing small and medium scale enterprises: Uganda's experience, *Bank of Uganda working p*aper, Kampala.

Katua, N. T. (2014). The role of SMEs in Employment Creation and Economic Growth in Selected Countries, *International Journal of Education and Research*, Vol. 2 No. 12, pp. 461-472.

Kawai, H. and Urata, Shujiro (2002). Entry of Small and Medium Enterprises and Economic Dynamism in Japan, *Small Business Economics*, Vol. 18, No. 1/3, pp. 41-51

Khalique, M. (2011). Do Malaysia and Pakistan are Suitable for a Comparative Study of SMEs: An Intellectual Capital Perspective, *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 3 (8), pp. 98-107.

Kongolo, Mukole (2010). Job creation versus job shedding and the role of SMEs in economic development, *African Journal of Business Management* vol. 4 (11) pp. 2288-2295.

Krongkaew, M (1988). The Current Development of Small and Medium Scale Industries in Thailand. *Asian Development Review,* 6(2), pp. 70-95.

Kumar, Nalabala Kalyan and Gugloth Sardar (2011). Competitive performance of micro, small and medium enterprises in India, *Asia-Pacific journal of social sciences*, Vol III(1) jan-june, pp. 128-146.

Kyaw, A. (2008). *Financing small and medium enterprises in Myanmar*. Retrieved from ttp://www.ide.go.jp/English/Publish/Download/Dp/pdf/148.pdf

Latif, A. and Abdullah, A. S. M. (2014). Detension and Remedies for Industrial Sickness in Small Industrial Units of Bangladesh: A Study on Sick Industrial Units of Industrial Estates in Sylhet Division, *Researchers World- Journal of Arts, Science & Commerce,* Vol. V (2), pp. 40-50.

Lewis, WA (1954). *Economic Development with Unlimited Supply of labour*, The Manchester School, 22.

Liargovas, P. (1998). The White Paper on Growth, Competitiveness and Employment and Greek Small and Medium Sized Enterprises, *Small Business Economics,* Vol. 11, No. 3, pp. 201-214. http://www.jstor.org/stable/40228975 Accessed on12-02-2016.

Lone, T. A., and Mir Zaffer Mehraj (2015). MSMEs in India: Growth, Performance and Various Constraints Impeding their Growth, *Journal of Economic and Sustainable Development,* Vol.6 No.5 ISSN 2222-1700 www.iiste.org.

Longenecker, J. G., Petty, C. W., Moore, J. W. and Palich, L. E. (2006). *Small Business Management, An entrepreneurial emphasis,* London: Thomson South Western.

Mairura, C. J., Namusonge, G. S. and Karanja, K. (2013). The Role of Financial Intermediaries in the Growth of Small and Medium Manufacturing Enterprises in Kenya: A Survey of Small and Medium Enterprises in Nairobi, *International Journal of Advanced Research in Management and Social Sciences,* Vol. 2, No. 5.

Majoni, T., Zvirikuzhe, C. and Mashiri, B. G. (2-16). Market Orientation in MSME: A Qualitative Case Study of MSME in Zimbabwe, *European Journal of Business and Management,* Vol. 8 No. 7, www.iiste.org.

Mancuso, JR (1984). How *to Start Finance and Manage Your Own Small Business*, (Revised Edition), New York: Prentice Hall Press.

Marwadi, M. K. (2014). The Survival of Micro, Small and Medium Enterprises in Indonesian Industrial Clusters: A Case Study of the Furniture and Footwear Industrial Cluster of East Java Province, Indonesia*, University of Wollongong Thesis Collection (1954-2016),* http://ro.uow.edu.au/theses/422.

Mbizi, R., Hove, L., Thondhlana, A. & Kakava, N. (2011). Innovation in SMEs: A Review of its Role to Organisational Performance and SMEs Operations Sustainability, *International Journal of Contemporary Research in Business*, Vol. 4 (11), pp.370-89.

Menon, I. N., Noonari, S., Wagan, H., Lakhio M. H. & Wakeel, A. (2016). Analysis on Technical Efficiency of Hybrid Maize Production in District Mirpurkhas, Sindh, *Management and Organisational Studies*, Vol. 3, No. 2, pp. 30-38. Available from: https://www.researchgate.net/publication/301668082_Analysis_on_Technical_Efficiency _of_Hybrid_Maize_Production_in_District_Mirpurkhas_Sindh [accessed Oct 5, 2017].

Mensah, S. (2004). A review of SME financing schemes in Ghana, *UNIDO Regional Workshop of Financing SMEs*, 15-16 March, Accra.

Meredith, G. G. (1986). *Financial Management of the Small Enterprise*, McGraw-Hill, Sydney, New South Wales.

Miller, E. (2008). *An Assessment of CES and Cobb-Douglas Production Functions*.,Congressional Budget Office. www.cbo.gov.

Mishra, S. (2012). Small Scale Industries: Striving and Thriving in the Era of Globalisation, *International Journal of Enterprise Computing and Business Systems*, Vol. 2 (2).

Mohammed, N. A., Ismail, B. K. and Ghafoorian, H. (2012). Examining Micro, Small and Medium Enterprises (MSMEs) Innovation Capacities in Manufacturing Sector: A Survey of Nigeria, *Interdisciplinary Journal of Contemporary Research in Business,* Vol. 4, No. 4. pp. 806-816.

Mukherji, R. (2014). Growth and Employment Potential of Small Scale Enterprises in India, *Asian Journal of Business Management*, Issue 1 (Vol.2).

Mutoko, Wilbert R. (2014), Challenges of Access to Markets and Opportunities for Small, Medium and Micro enterprises (SMMEs) in Botswana, *European Scientific Journal,* Special edition, ISSN: 1857-7881, pp.28-38.

Naidu, S. and Chand, A. (2013). Financial Problems Faced by Micro, Small and Medium Enterprises in the Small Island States: A Case Study of the Manufacturing Sector of the Fiji Islands, *International Journal of Business Excellence*, Vol. 6(1).

Nanjundan, S. (1994). Changing Role of Small-Scale industry: International Influences, Country Experiences and Lessons for India, *Economic and Political Weekly,* Vol. 29, No. 22, http://www.jstor.org/stable/4401264, Accessed on 12-02-2016.
Narayana M. R. (2004). Determinants of competitiveness of small-scale industries in India, *The Journal of business development in Developing Nations*, Volume 8.

Narware P.C, (2011). Human resource management in small scale pharmaceutical industry in Madhya Pradesh, *International Journal of Enterprise Computing and Business Systems*, Vol. 1 Issue 2.

Naser, V. A. (2013). A Critical Evaluation of the Contributions made by the Micro, Small and Medium Enterprises in Indian Economy, *International Journal of Marketing, Financial Services and Management Research*, Vol. 2, No.7, pp.151-158.

Nath, H. K. (1998). Relative Efficiency of Modern Small Scale Industries in India: An inter-state comparison, *Seminar paper* (based on M. Phil. dissertation at the Jawaharlal Nehru University, New Delhi, India) presented at the Texas Camp Econometrics III held at Lago Vista.

Naqvi, S.A.A. and Ashfaq, M. (2013). Technical Efficiency Analysis of Hybrid Maize Production Using Translog Model Case Study in District Chiniot, Punjab (Pakistan), *Agricultural Sciences*, Vol.4. No. 10, pp. 536-540.

Nkuah,,Joseph K. Tanyeh, John P. & Gaeten, K. (2013). Financing small and medium enterprises (smes) in ghana: challenges and determinants in accessing bank credit, International Journal of Research In Social Sciences, Vol. 2, No.3.

Nkwe N. (2012). Role of SMES in Botswana, *American International Journal of Contemporary Research,* Vol. 2 No. 8.

OCED (2000). *Enhancing the Competitiveness of SMEs Through Innovations*,
Conference for Ministers Responsible for SMEs and Industry Ministers, Bologna, Italy.

OECD (2010). *Working Paper on SMES and Entrepreneurship (WPSMEE) 'BOLOGNA+10' HIGH-LEVEL MEETING on 'lessons from the global crisis and the way forward to job creation and growth'*, PARIS, 17-18 NOVEMBER.

Oketch, M. O. (2006). Determinants of Human Capital Formation And Economic Growth of African Countries, *Economics of Education Review*, Vol. 25, pp.554-564.

Ogechukwu, A. D. (2006). The Role of Small Scale Industry in National Development in Nigeria, *Association for Small Business and Entrepreneurship, 32nd Annual Conference,* Corpus Christi, Texas Nov. 1-3.

Okowe, L., Nwakoby, Clem, I. N. & Okorie, E. U. (2016). Economic Openness and Industrial Development in Nigeria, *Journal of Policy and Development Studies*, Vol. 10(1), pp. 12-26.

Olawale, F. and Garwe, D. (2010). Obstacles to the growth of new SMEs in Soth Africa: A Principal Component Analysis Approach, *African Journal of Business Management,* Vol. 4(5), pp. 729-738.

Osotimehin, K.O., Jegede, Charles A., Akinlabi B. H & Olajide, O. T. (2012), An Evaluation of the Challenges and Prospects of Micro and Small Scale Enterprises Development in Nigeria, *American International Journal of Contemporary Research*, Vol. 2 No. 4; April 2012. 174.

Pandey, V. (2013). Trends, Opportunities & Challenges in Small Scale and Cottage Industries in Uttar Pradesh, *Asian Journal of Technology & Management Research,* (ISSN: 2249-0892), Vol. 03 (02).

Pettit, R.R., and Singer, R. F. (1985). Small Business Finance: A Research Agenda, *Financial Management*, 14(3).http://www.jstor.org/stable/3665059.

Prajneshu (2008). Fitting Cobb-Douglas Production Functions: Revisited, *Agricultural Economics Research Review*, Vol. 21, pp. 289-292.

Pujar, U. (2014). MSMEs and Employment in India: An analytical study, *IOSR Journal of Business Management (IOSR-JBM)*, Vol.16(5). Ver.II, pp.13-15.

Qamruzzaman, Md. (2015). Productivity and Performance Evaluation of SME Sector in Bangladesh: Evidence from the Historical Data, *Journal of Islamic Finance and Business Research*, Vol 3 (1), pp. 14-22.

Qureshi, J. A. (2012). The Role of Small and Medium-Size Enterprises in Socio-Economic Sustainibility in Pakistan, *Global Journal of Management and Business Research,* Vol. 12, Issue 19.

Rankhumise, E. M and Rugimbana, R. O. (2010). Micro Enterprise Owner Perspective on Performance: Insights from Selected Municipalities in Mpumalanga Province, South Africa, *African Journal of Business Management*, Vol.4(16), pp. 3500-3507.

Rasool, S., Dars, J. A. and Shah, B. (2013). The Role of Commercial Banks in Production of Small and Medium Enterprises (SMEs) in Pakistan, *https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2495796*, Accessed on 09.04.2018.

Ravi, S. (2009). Entrepreneurial Development in the Micro, Small and Medium Enterprise Sector in India: A Policy Analysis. *https://ssrn.com/abstract=1564092*.

Roper, S. (1997). Product Innovation and Small Business Growth", A Comparison of the Strategies of German, U.K. and Irish Companies, *Small Business Economics*, Vol. 9 (6), pp. 523-537.

Saini, P. (2014). Study on Micro, Small and Medium Enterprises, *Centre for Civil Society, Working Paper Series*, No. 319. www.ccs.in.

Saluja, D. (2012). Role of MSME's in Economic Development of India, *Journal of Economics, Commerce and Research (JECR),* Vol.2(1), pp. 1-9.

Sarwako, E. and Frasdiantara, C. (2016). Growth Determinants of Small Medium Enterprises (SMEs), Universal Journal of Management, Vol. 4 (1), pp. 36-41.

Satake, M. (1998). Cottage, Small and Medium Scale Industries, *Phillippine Studies,* Vol. 46, No. 2, www.jstor.org. Accessed on 12-02-2016.

Schreyer, P. (1996). SMEs and Employment Creation: Overview of Selected Quantitative Studies in OECD Member Countries, *OECD Science, Technology and Industry Working Papers*, 1996/04, OECD Publishing.   http://dx.doi.org/10.1787/374052760815.

Sharma, R. and Afroz, Z. (2014). Growth and Performance of MSME's in Present Scenario for the Development of India, *International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS)*, Vol. 1, No. 5.

Smit, Y. and Watkins J. A. (2012). A Literature Review of Small and Medium Enterprises Risk Management Practices in South Africa, *African Journal of Business Management,* Vol. 6(21), pp. 6324-6330.

Soini, E. and Veseli, L. (2011). Factors Influencing SMEs Growth in Kosovo, *International Business Management- Turku University of Applied Sciences,* Finland.

Srinivas, K. T. (2014). Financial Assistance to micro, Small and Medium Enterprises with references to Canara Bank, *IRACST- International Journal of Commerce, Business and Management (IJCBM)*, Vol. 3, No. 4, pp. 578-588.

Storey, D.J. and S.G. Johnson (1990). A Review of Small Business Employment Data Bases in the United Kingdom, *Small Business Economics*, 2(4), 279–299.

Subhan, Q. A., Mehmood, M. R. & Sattar, A. (2013). Innovation in Small and Medium Enterprises (SMEs) and its Impact on Economic Development in Pakistan, *Proceedings of 6th International Business and Social Sciences Research Conference,* Dubai, UAE.

Suman, Y., Jamal, T., Pohit, S., Saini, M. K., Pandey, J. & Yadav, N. K. (2014) Promoting Innovation in Indian MSMEs: Policy Perspectives, *ISTIP Policy Bulletin No.7*, https://www.researchgate.net/publication/279873882.

Syed, Anwar A. S., Ahmadani, M. M., Shaikh, N & Shaik, F. M. (2012). Impact Analysis of SMEs Sector in Economic Development of Pakistan: A Case of Sindh, *Journal of Asian Business Strategy*, Vol. 2(2), pp. 44-53.

Thevaruban, J.S. (2009). Small Scale Industries and its Financial Problems in Sri Lanka, *Journal of Asia Entrepreneurship and Sustainability*, 5 (2), pp. 33-45.

Uma, P (2013). Role of SMEs in Economic Development of India, *Asia Pacific Journal of Marketing Review,* Vol.2 (6), ISSN: 2319-2836.

Unam, M. J. and Unam, F. J. (2013). Promoting Production Capabilities of Small-Scale Manufacturing Business Through Microfinance Banking in Nigeria, *JORIND,* 11(2), pp. 43-50.
http://www.transcampus.org/JORINDV11Dec2013/Jorind%20Vol11%20No2%20Dec%20Chapter7.pdf

United Nation Industrial Development Organization (1969). *Small Scale Industry, UNIDO Monographs on Industrial Development, No.11*. New York: United Nations.

Valdez-Juarez, L. E., Lema, D. G. D., & Maldonado-Guzman, G. (2016). Management of Knowledge, Innovation and Performance in SMEs, *Interdisciplinary Journal of Information, Knowledge, and Management*, Vol. 11, pp. 141-176.

Verma, D. R. and Kuldeep (2014). MSMEs: A Study of Entrepreneurial Development to its Challenges in India, *International Journal of Management, MIT College of Management*, Vol. 2, No. 2, pp. 97-101.

Vepa, R. K. (1997). Small Can Be Beautiful Recommendations on Small Enterprises, *Economic and Political Weekly,* XXXII (27), 1581-1583.

Vepa, R. K. (1998*). Modern Small Industry in India Problems and Prospects*. New Delhi: Sage Publications.

Voulgaris, F., Asteriou, D. Agiomirgianakis, G. (2003). The Determinants of Small Firm Growth in the Greek Manufacturing Sector, *Journal of Economic Integration*, Vol. 18(4). Pp. 817-836.

Wiboonchitikula, P. (2002). Small and Medium Enterprises in Thailand: Recent Trends, *Small Business Economics*, Vol. 18. No. 1/3, pp. 213-226.

Wu, D. (2009). *Measuring Performance in Small and Medium Enterprises in the Information & Communication Technology Industries*, School of Management, College of Business, RMIT University-Melbourne.

Zimmermann, V. (2009). The Impact of Innovation on Employment in Small and Medium Enterprises with Different Growth Rates, *Journal of Economics and Statistics,* Vol.229, No. 2/3, pp. 313-326. http://www.jstor.org/stable/23812743, Accessed on 16.feb.2016

References

- *Annual Administrative Report, 2014-15*, Department of Industries and Commerce, Government of Nagaland
- *Annual Report, 2013-14*. Ministry of Micro, Small and Medium Enterprises, Government of India, New Delhi-110107.
- *Basic Statistics of NER-2015*.
- *Census of India 2011*, Provisional Population Totals, Nagaland series 14, Directorate of Census Operations, Nagaland.
- *Nagaland State Human Development Report (2014).*Department of Planning & Coordination, Government of Nagaland.
- *District Rural Development Agency (DRDA)*: drdachamba.org/schemes/SHGs/ Main.htm; Retrieved on 26-04-2016.

- *Final Report of Fourth All India Census of Micro, Small and Medium Enterprises (2006-07):* Registered Sector.

- *Final Report of Fourth All India Census of Micro, Small and Medium Enterprises (2006-07):* Unregistered Sector.

- *Guide to Entrepreneurship (Year of the Entrepreneur, 2010-11),* Government of Nagaland, Department of Industries and Commerce

- *Nagaland Economic Survey, 2015-16.* Department of Economics and Statistics, Government of Nagaland.

- *Nagaland Economic Survey, 2016-17.* Department of Economics and Statistics, Government of Nagaland.

- *North Eastern Region Vision 2020*, Ministry of DoNER, NEC, 2008.

- *Statistical handbooks of Nagaland*, Directorate of Economics and Statistics, Government of Nagaland.

- *Status of Small Scale Industries in the North Eastern States of India. Published by Press Information Bureau*, Ministry of Information & Broadcasting, GOI, Guwahati, 2006. https://pibguwahati.nic.in/fr-ssi-status-ne.asp. accessed on 07.04.2018

- www. dcmsme.gov.in.

- 1,2,3. Source: Boundless. "Types of Ownership." *Boundless Business*. Boundless, 21 Jul. 2015. Retrieved 16 Feb. 2016 from
  https://www.boundless.com/business/textbooks/boundless-business-textbook/small-business-and-entrepreneurship-7/starting-a-small-business-58/types-of-ownership-280-7209/

- http://www.investopedia.com/terms/i/investment.asp#ixzz4tEBHyLrx

- http://www.investopedia.com/terms/s/soleproprietorship.asp#ixzz40DHoRHIc

- http://www.businessdictionary.com/definition/partnership.html#ixzz40J98ZJgi

- http://www.businessdictionary.com/definition/cooperative.html#ixzz40Dk3gHp

- https://en.wikipedia.org/wiki/Innovation

- https://www.coursehero.com/file/p4bnjju/19-Concluding-Comments-The-Cobb-Douglas-type-of-production-function-has-been/

- https://www.merriam-webster.com/dictionary/production

- dcmsme.gov.in/publications/EMII-2014-15.pdf

- www.knnindia.co.in
- https://inc42.com/buzz/north-east-venture-fund/ accessed on 26-10-2017
- https://www.merriam-webster.com/dictionary/transportation
- https://www.nsmdcltd.com
- http://erasmusentrepreneurs.kayako.com/Knowledgebase/Article/View/44/5/what-is-the-european-union-definition-of-micro-small-or-medium-sized-enterprise-sme
- https://www.ukessays.com/essays/management/definition-of-sme-in-china-management-essay.php
- https://bdnews24.com/business/2011/06/20/bangladesh-bank-redefines-sme
- https://www.ukessays.com/essays/management/definition-of-sme-in-china-management-essay.php
- https://en.wikipedia.org/wiki/Small_and_medium-sized_enterprises