

**ECONOMICS OF PRINTING
INDUSTRY IN PUNE
- AN EMPIRICAL STUDY**

By

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AUGUST 1987

CERTIFICATE

Certified that the work incorporated in this Thesis "ECONOMICS OF PRINTING INDUSTRY IN PUNE - AN EMPIRICAL STUDY" submitted by Shri S.R. Dastane was carried out by the candidate under my supervision. Such material as has been obtained from other sources has been duly acknowledged in the thesis.

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ECONOMICS OF PRINTING INDUSTRY IN PUNE

- AN EMPIRICAL STUDY

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CHAPTER 1

PRINTING AND PRINTING INDUSTRY

1.1 Introduction

Printing has been regarded as one of the most significant inventions during the last five hundred years. This invention has given a great fillip to the spread of knowledge. Command over the printed world emerged as an effective tool, also a prerequisite for geographical expansions and building up of empires in nooks and corners of the world. The ubiquitous printed literature has been at the root of most of the economic, political, social and ideological revolutions in the last five centuries. The art of printing proved conducive to the emergence, development, consolidation and transmission of several ideas and ideals in the modern world. The printing activity is the fundamental and creative activity in the modern civilized society.

As population grows, literacy spreads and the demand for printed material multiplies. In the words of Chenery, the printing industry shows the growth elasticity to be 1.7, suggesting thereby that this industry would grow more than proportionately as income in the economy in general grows.¹ An illustration would make this point more clear. The tourism industry is the one with high income elasticity of demand. Increased internal and international tourist

traffic would lead to continued expansion in the market for multi-lingual promotion literature, advertisements, posters, holiday brochures, stickers, pamphlets and similar tourism literature. Growth, diversification and changes in the economy would give a boost, in the form of derived demand, to the printing industry. The study of printing industry is instructive from this point of view. Since the printing industry is going to bear the direct and indirect impact of the widespread economic, social, industrial and commercial changes that are currently taking place, and are going to take place, the study of this industry from all possible angles needs be attempted for both academic and practical insights.

Printing is an industry having close links with many other important industries in the economy. Paper, ink, chemicals, photofilms, machine tools and machine parts are some industries which are closely linked to the printing industry. The share of this group of industries can be illustrated by the Annual Survey of Industries Statistics of the Government of India. The Table 1.1 below indicates statistics from the Annual Survey of Industries (A.S.I.) (factory sector) for 1980-81. The industry group 28 refers to the manufacture of paper and paper products and printing, publishing and allied industries.

Table 1.1 : Share of Industry Group 28 (1980-81)
Factory Sector

Item (1)	All India Total (2)	Industry Group 28 (3)	
1. No. of factories	96,503	4,798	(4.97%)
2. Fixed capital (Rs. crore)	29,900	833	(2.79%)
3. Employees ('000)	7,715	273	(3.54%)
4. Total output (Rs. crore)	61,084	1,697	(2.78%)
5. Net value added (Rs. crore)	11,929	434	(3.64%)

Source : A.S.I., 1980-81, Factory Sector, Central Statistical Organization (C.S.O.), Ministry of Planning, New Delhi, April 1984 and February 1985.

Note : The figures in brackets indicate the share of the industry group 28 in respect of the items noted in column No. 1. For instance, the factories in group 28 form 4.97 per cent share in the total factories in India for the year under reference. The share of this industry group in the total fixed capital invested in India was 2.79 per cent, for employees it was 3.54 per cent, for the value of total output, it was 2.78 per cent and the net value added it was 3.64 per cent.

The main limitation to the statistics cited above is that it covers only the factory sector and thus the comparatively smaller establishments not classified as a factory under the definition of the Factory Act do not come under the purview of the Annual Survey of Industries.

However, the statistics above is merely indicative of the

importance of this group of industry in the national industrial economy. The Table above needs to be analysed from another view point.

If we take up three digit industries classification, the picture would be still more clear. As we are undertaking the study of printing industry as such, we shall be concerned, in particular, with the industry groups 285 and 289 in the three digit classification of industries introduced by the Central Statistical Organization, New Delhi. The share of these industry sub-groups - which form the sub-part of the industry group No. 28 has been reproduced in Table 1.2.

Table 1.2 : Share of Industry Groups 285, 289
Annual Survey of Industries (Factory Sector)
(1980-81)

Item	All India all fac- tories	All India Industry Sub-group 285	All India Industry Sub-group 289
1. No. of factories	96,503	1,262	1,732
2. Fixed Capital (Rs. Crore)	29,900	60	49
3. Employees ('000)	7,715	71	45
4. Total Output (Rs. Crore)	61,084	184	192
5. Net Value Added (Rs. Crore)	11,929	72	72

Source : A.S.I., 1980-81, Factory Sector, C.S.O., Ministry of Planning, New Delhi, April 1984 and Feb. 1985.

The industry sub-group 285 includes printing and publishing of periodicals, books, journals, atlases, sheet music, music directories, etc. The industry sub-group 289 includes printing and publishing of allied activities not elsewhere classified, like envelop printing, picture post-card printing, embossing, etc. Both the tables presented above have the same limitations. They deal only with the factory sector in the country. And secondly, some small percentages remain uncovered as only the statistics of the reporting factories are included in the data noted above.

The upshot of the discussion upto now suggests that the printing industry in our country certainly has a significant place in our industrial structure. As will be clear from the Table 1.2, the factories from the sub-groups 285 and 289, put together formed about 3.1 per cent of all the factories in India in 1980-81. In a growing and changing economy, this industry is going to show the expanding phase in the long run, and therefore, the study of the economics of this industry can be amply justified.

It will not be out of place to mention two developments which have occurred to this industry recently. The Central Government by amendment No. 17 of 1979 included the printing and lithographic industry in the first schedule of the Industries (Development and Regulation) Act, 1951. Now this industry is subject to registration, licensing, investi-

gation, direct management and control of the Central Government. As per one of the provisions of the same Act the Central Government in 1983 has appointed a Development Council to take a long range view of the development of this industry.

Another noteworthy development that has taken place recently is the liberal import of printing machinery allowed in the country since 1978. It is believed that the imports would boost up the programme of modernisation, technological improvement and innovations in the industry. The age of computers and electronics is revolutionizing this industry also.

Before various aspects of the printing industry are further studied as such it will be appropriate to note some important features of printing firm and printing industry. A printing firm, conventionally called a printing press, provides the printing service to its clients. Paper for the book or the job is provided by the client, or is purchased on behalf of a client and after printing on paper, the same is returned to the client in a book form. In this sense, it is a service industry. A printer employs compositors, pressmen, binders, etc., and he provides the printing service. But printer is not merely a labour contractor. He invests in premises, types, machines, uses raw material such as ink, chemicals, film, glue, etc., and thus adds value to

the inputs. Thus, like any other firms, the printing press has to maintain machinery, deadstock, inventory and at the same time provide service to the client.

Printing is an order-based industry. Each job to be printed has to be dealt with separately. A printing press cannot keep a stock of the material printed ready to be delivered across the counter in anticipation of the client when a client approaches. As per the specifications of each job, preferences and liking of each client, a job has to be undertaken and finished. The size of the job varies. Colour-scheme may be different. Language may be different. The use of paper would change from client to client and thus each job is a unique work in itself. Since the standardized product in this industry is generally absent, the standard costing and pricing practices are just not possible. In many cases, the clients themselves participate in the act of costing and price determination.

A printing firm shows another type of behaviour. A product flowing out of a printing press cannot be resold. The type of a product changes as per the clients. The variety of printed product is so vast, (labels, letterheads, delivery challans, slips, etc.) that no one attempts to cultivate the whole range. Therefore, printers tend to enter new product markets constantly and thus try to insulate themselves against tough competition.² Due to absence of standard products, competition based on costs

or prices has little scope, but nonprice competition plays more crucial role in this industry. Punctuality, quality, service, neatness, trade credit, after-sales-service and host of other subjective factors play a decisive role in this industry. Since there is no big market for a uniform standardized product, winning each client for each job becomes imperative. Therefore, marketing a printed product becomes highly specialized, skillful and individualized job.³

Talking of printing industry in the context of India, the most significant feature evident at the outset is the domination of small firms in the industry. According to the survey attempted by Operations Research Group, in India, there are about 70 per cent of presses employing less than 10 workers.⁴ Therefore, while studying the economics of this industry, the peculiarity of small-firm domination of printing industry shall remain uppermost in the analysis that follows. Economies of scale, problems of obtaining capital, risks and rewards of small firms, all will have to be discussed while the economic analysis of this industry would be attempted.⁵

Some features of the nature of competition within the industry have been presented above. We also have to note the type of competition which this industry as a whole is facing. It is the new reproduction machinery, namely, the xerographic machines which are posing a tough competition

to the traditional printing presses. The growing use of office equipment machinery is likely to pose another threat to the printing industry. It is the invention of word processor and personal computers which are going to affect the demand pattern for the printed jobs in the traditional sense. For instance, the computer with the text printing facility will no more need the printing of accounts in the conventional sense. The present study will try to find out whether and how far in the field under investigation, these tendencies are visible, with what impact, and with what magnitude, etc.. The challenge of changing technologies will be investigated in the light of the observations pertaining to the field under study.

1.2 Objectives

The present study intends to take up the economic analysis of printing industry within the limits of Pune City. This city has some outstanding features as far as printing industry is concerned. The State of Maharashtra, wherein the city of Pune is situated, is the second largest producer of dailies, weeklies and periodicals in India. This State has the second highest literacy in India, as per the 1981 Census. Next to Bengal, it was in this State that the printing industry spread in the past. The city of Pune, the second most populous city in Maharashtra, has been a centre of educational, cultural, academic and

political activities in Western India. It has led scores of educational, literary movements in Maharashtra, and needless to say that this city has remained a centre for traditional and modern learning, ranging from Vedic studies to computers. Against this background it is going to be both interesting and rewarding to study printing industry in Pune, which is both the cause and effect of these changes taken place during the last century or so.

Academic, scholarly and literary achievements of Pune City are only one aspect of its diversified individuality. The last couple of decades have witnessed the emergence of scores of heavy engineering, machinery, vehicle manufacturing and ancillary industrial units in and around Pune. This has given tremendous boost to the tertiary sector in the city. The growth of banking and insurance units, and increase in the number of doctors, engineers, advocates, consultants, chartered accountants have taken place. A new stock market was opened in Pune in 1983. All this has multiplied the demand for job printing and commercial printing in Pune City.

1.3 Scheme of the Study

The present study attempts an economic analysis of the printing industry in Pune City. The following is the scheme of chapters that are going to discuss and analyse various aspects of printing industry.

- Chapter 1 - discusses the main features of printing as an art, as a science and as an industry.
- Chapter 2 - This chapter shall mention facts about the city of Pune, highlighting the important socio-economic aspects. Against this background, the economic analysis is going to proceed.
- Chapter 3 - This chapter traces the history of printing activity in Pune City.
- Chapter 4 - This chapter analyses the legal infrastructure of this industry. It states various acts and rules which are applicable to this industry.
- Chapter 5 - A brief review of the past literature has been presented in this chapter.
- Chapter 6 - This chapter enumerates the research design and methodology followed in the present study.
- Chapter 7 - This chapter analyses the data collected from the field inquiry. The chapter with the help of the data tabulated and presented, shall study the aspects such as :
- (i) the structure and composition of industry
 - (ii) growth development and diversification of the industry

- (iii) capital employed within the industry
- (iv) wages and labour conditions
- (v) industrial relations within the industry
- (vi) financing of the industry
- (vii) availability of resources and capacity utilization
- (viii) technological improvement and responses to the same
- (ix) employment aspects
- (x) social background of workers
- (xi) extent and nature of competition within industry
- (xii) management problem within the industry.

Chapter 8 - Summary, conclusions and policy measures.

The present study will thus be a microstudy of an industry from its economic view point. The communications sector of an economy shows a certain tendency of growth while the economy grows in general. Printing is an important industry within the communication sector. It will also reveal whether the printing industry can make contribution worth mention to the economy of a city like Pune. The study will also test empirically some basic concepts in Economic science : the objectives of the firms, their motives for

expansion, their management problems, their production strategies, motives for diversification, etc.

APPENDIX TO CHAPTER 1Technique and Art of Printing

Alongwith radio, television and motion picture, printing is one of the most important means of mass communication. The art of printing has put more knowledge in the hands of more people faster and cheaper than ever before. Printing became man's most powerful weapon against his worst enemy - ignorance.

Printing traditionally has been defined as a 'technique for applying under pressure a certain quantity of colouring agent onto a specified surface to form a body of text or an illustration'. The techniques developed recently do not any longer depend on mechanical pressure or for that matter even the colouring agent. Therefore, printing may now better be defined as "any of several techniques for reproducing text and illustrations, in black or in colour, on a durable surface and in a desired number of identical copies". Printing is used not merely for books or journals or newspapers and magazines but also for textiles, metals, wallpaper, packaging, etc. However, we shall be concerned with printing on paper only.

Today, printing is done by any one of the three processes :

1. Letterpress process or relief printing
2. Offset - lithographic process or flat surface printing.
3. Gravure printing or sunken surface process of printing.

1. Letterpress is the oldest and the most widely used printing process. The relief or raised surface - such as a type or a block is inked and is pressed against paper to get a copy of a printed material.

When the copy or material to be printed is handed over to a printer, he passes the same on to a typesetter or a compositor. A type is made up of an alloy of lead, antimony and tin, sometimes also with copper. With the help of movable types, the letters or characters are set together into words, then into lines and subsequently into paragraphs and pages. This process is done by the compositor by hand or even by a machine. Two major types of mechanical metal composing are : Linotype or Monotype. In the late 1880's a German-born Ottamer Mergenthaler, based in the United States, invented a Linotype, i.e., a typecasting compositor that cast a solid one piece line mechanically. In 1885, T. Lanston from U.S. invented the monotype which casts individual pieces of types for a line and then adjusts the spaces in between the words. In 1911, another American Ludlow perfected a third type of semi-mechanical

typesetter, but this process is not in much use today.

All the type set in pages is to be checked for errors. A trial impression called proof is pulled out and the proofreader checks all proofs for accuracy, omissions, layout, etc. If the matter contains any illustrations, relief engravings or blocks are made. The composed material and blocks are locked together in a chase which is used for printing.

The letterpress process usually uses any of the following processes : (i) plane to plane - called platen press, (ii) cylinder to plane - called flat-bed press, and (iii) cylinder to cylinder called the rotary principle. One of the surfaces here would hold the type having a thin film of ink layer and the other would hold the paper for registering impressions. The first process is generally meant for commercial printing or small job printing where sheets of paper are fed to machine. The second process is mainly used for books, journals and magazines where again sheets of paper are supplied to machine. The rotary process is meant for mass production of newspapers, magazines, etc. It can either accept sheets or can print on reels of paper called web.

2. Offset printing is another process of printing on paper. It is based on the principle that oil and grease do not mix with water. The process was discovered by a German called Alois Senefelder in 1798. The process is

called either offset printing or lithographic printing or planographic printing because printing is done on a plain surface.

The matter which is to be printed is firstly photographed and the negative is obtained. The negative is exposed on a metal plate that has a light sensitive coating. The plate then is developed and then chemically treated so that when it is on the press, only the images accept the ink. Offset presses are rotary presses. The printing plate is clamped to the plate cylinder. Then with the help of blanket cylinders, the image is registered on paper. Offset also can print one colour at a time or multi-colours simultaneously. It can accept sheets of paper or even the rolls (webs). Some offset machines have been devised to print both the sides at a time. The offset printing process is observed to be much faster, superior and is a boon to reproduce perfect images as the originals. Technologically speaking, the offset process is fast replacing the letterpress method using hot metal.

3. Gravure is an intaglio method of printing, i.e., the pictures or matter to be printed is sunk into a printing plate or printing cylinder. Images are put on the printing plate or cylinder photographically. Then acid is used to cut the images into the plate. A carbon tissue, a sheet of paper covered with light-sensitive gelatin is utilised for

preparing printing plates. The printing process is either sheet fed or web fed. This method is used to print magazine sections of newspapers, wedding invitations, visiting cards, etc.

In addition to the processes described above, there are some other processes also, the important among them being :

(A) Screen printing - also called screen process printing or silk-screen printing or serigraphy. This requires a stencil and a fine cloth or wire screen. The stencil has the design or material to be printed. This stencil is mounted against the screen. Ink is squeezed through the stencil on to the surface to be printed. This process can be used for printing on paper, glass, cloth, wood or almost any other surface. Even a print can successfully be attempted on draperies, banners, bottles, toys and furniture. This process can be done automatically or by hand operated process. The impression of this printing is superior to the traditional letterpress printing. This process is used to print wedding cards, greeting cards, visiting cards, book covers, etc.

(B) Collotype printing - also called photogelatin printing. This process is similar to lithography. A light sensitive coating of gelatin is put on a metal plate or glass plate. The plate is soaked in a solution of

water and glycerin. The printing is done as per the tones registered on the plate.

(C) Electrostatic printing - This process reproduces original material without ink or pressure. It is a process in which negatively charged powder is sprinkled on a positively charged surface. Use of selenium in this process is because it conducts electricity when exposed to light. Either plane paper copying technique is followed or coated paper copying methods. But the former is an automatic one, a quick one, and is also cheaper comparatively. This process, popularly known as xeroxing, is widely used now-a-days, especially for making office records and confidential printing. Even a coloured xerographic impressions are available; they may print one colour or even multiple colours at a time. A high speed of even two copies a second can be achieved in xerography. New techniques in this method of printing have enlargement and reduction facilities.

The printing industry is currently witnessing a wave of technological changes and innovations in various processes involved in the act of printing. Computers and photographic machines are utilized at the composing stage. The conventional hot metal composing is being substituted by a photo-composing process. In this process, the composition of text is attempted by means of characters photographed on a film that serves as a basis for making plate and subse-

quently printing by the offset process. A memory can store substantially larger quantity of the text matter than the letterpress could do in the past. Automation in the processes of folding, collating, binding is imminent. Time consuming stages of proof corrections and pre-printing delays are now being eliminated.

NOTES AND REFERENCES

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2. This tendency has been enumerated by Fred C. Munson in his Labour Relations in Lithographic Industry, Harvard University Press, U.S.A., 1963, Ch. IV.
3. Ibid.
4. Report on Survey of Printing Industry in India, Ministry of Industry, Government of India, New Delhi, 1980, p.1.
5. Some of these problems on the theoretical level have been dealt with by Graham Bannock, in his The Economics of Small Firms, Basil Blackwell, Oxford, 1981.

CHAPTER 2

PUNE CITY

- SOCIO-ECONOMIC BACKGROUND

2.1 Introduction

The purpose of this research is to study the printing industry in Pune City. The city of Pune is known as a military, educational, cultural and administrative centre in western India for more than a century in the past. Great intellectuals, political thinkers, activists and leaders during India's freedom struggle like Gopal Krishna Gokhale, Lokmanya Bal Gangadhar Tilak, Gopal Ganesh Agarkar, Mahatma Jyotiba Phule and Dhondo Keshav Karve hailed from this city. They planted the name of this city on the map of India undertaking political and social reforms. Scores of academic and research institutions have been located in this city. To name only a few : Fergusson College, Bhandarkar Institute of Oriental Research, Deccan College, Bharat Itihas Sanshodhan Mandal, etc. Even after Independence institutions of national importance like National Chemical Laboratory and College of Military Engineering were established in Pune.

Several defence establishments have also been in and around Pune for a long time. The city has the Ordnance Factory and High Explosives Factory situated in the western part of the city. Shortly after Independence, the National

Defence Academy was established at Khadakvasla at south-west of Pune. The city also has an Air Force Station and is headquarter of the Southern Command of the Indian Army. Defence areas around Pune include Kirkee and Dehu Road Cantonments.

Administratively speaking, Pune has been the district headquarter of Pune district, and also the tahsil headquarter of Pune City tahsil. It has the office of the Zilla Parishad. It also is the divisional headquarter encompassing five districts of Pune, Satara, Sangli, Kolhapur and Solapur. The Directorate offices of the Departments of Agriculture, Cooperation, Education of the State of Maharashtra are located in this city.

Pune also is a University headquarter, having about 3,000 students studying at the University Campus, and having about 85,000 students studying in 170 affiliated and constituent colleges. It has about 25 institutions recognized for advanced learning and research. Pune also has been the cultural capital of Maharashtra. The city has remained in the forefront in the development of Marathi literature, theatre and cinema.

2.2 Brief History¹

Pune has been one of the oldest towns in western India. The known history of the town dates back to over fifteen hundred years. Coins discovered in Indapur Tahsil

of the district, at the south-eastern end of the district, suggest that the town was under the Traikutaka King by about 465 A.D. Silver coins discovered near Junnar, at the northern end of the district, suggest that this area was under the Andhra kings some time after that.² Rashtrakuta kings conquered this area from Chalukyas in 754 A.D. A copper plate inscription refers to Pune as Punyavishaya (पुण्यविषय) and also makes a mention of villages Bopkhel, Bhosari, Kalas and river Mula in the same inscription. Another inscription of 768 A.D. calls Pune as Punaka Vishaya. Pune, under the Rashtrakutas was called as Punaka wadi.³

Pune came under the rule of Yadavs of Devgiri (Daulatabad) in 973 A.D. In 1294, this area after the defeat of Raja Ramdev, came under the Delhi rule of the Moghuls. Pune was known as Kasbe Pune then. For a brief period after 1347, the area formed a part of Bahamani empire. After 1490, the area formed the part of Nizamshahi, having its headquarters at Ahmednagar. During the second half of the sixteenth century, Bhosales became jagirdars of this province. In the first quarter of the seventeenth century, Shahaji Bhosale shifted his loyalty from Nizam to Adilshah of Bijapur. In 1637 Shahaji appointed Dadoji Kondadev to look after Pune and surrounding territory. Though Shivaji chose Rajgad and later Raigad, as his capitals, Pune remained the principal centre of strategic,

political, diplomatic and military activity in the second and third quarter of the seventeenth century.

The Peshwa rule started in 1713. During this regime, the centre of political activity shifted from surrounding forts to Pune City. In 1730 the famous Shanwar Wada was constructed. During the remaining part of the eighteenth century, Pune remained the capital of Peshwas. In 1818, British forces occupied Pune and that was the end of Peshwa rule in western India.

As mentioned earlier, the city of Pune, long before was only the Kasba Peth, on the bank of Mutha river. The strategic and military importance of Pune increased from the Peshwa and British days. In 1637, the city consisted of Kasba, Murtazabad (the present Shanwar Peth), Malkapur (the present Raviwar Peth) and Shahpura (Somwar Peth). Later on at various stages new wards were established, i.e., Ashtapur (Mangalwar Peth), Mohiyabad (Budhwar Peth), Visapur (Shukrawar Peth), Vetral Peth, Nihal Peth, Bhawani, Sadashiv, Rasta, Nana and Ghorpade peths.

The Pune Cantonment dates back to 1818 when British troops put up their camps to occupy Pune.

Some important dates in the life of Pune City can be noted :

1848 Dnyanaprakash daily and Native General Library were started.

- 1869 Khadakvasla dam construction was completed, giving boost to farming activity to the eastern part of Pune, Ammunition Factory was established at Kirkee near Pune.
- 1880 The Kesari started its publication.
- 1884 Pune Suburban Municipality was established.
- 1885 Deccan Education Society and Fergusson College were established.
Mundhwa Paper Mill was established.
- 1886 Pune-Miraj metre guage line were inaugurated.
- 1892 Raja Bahadur Textile Mill was established.
- 1896-1911 Plague epidemic claimed about 53,000 lives. The calamity was worse than the Panipat!⁴
- 1915 Underground drainage system came to be opened.
- 1916 Town Planning Act came to be applied to Pune
- 1918 Influenza epidemic
- 1924 Shivajinagar Railway Station was inaugurated.
- 1935 Bank of Maharashtra was established.
- 1941-1951 During the decade there^{took} place growth of Military Accounts, Ordnance Depots, High Explosives Factory Oil engine factory, Sindhi and Punjabi families migrated to Pune in large number.
- 1949 University of Pune was established.
- 1950 Pune Municipal Corporation was established.
- 1956 Hadapsar Industrial Area development started.

- 1960 MIDC area near Pimpri-Chinchwad was inaugurated.⁵
 1961 Panshet dam disaster.

2.3 Geographical Setting

The centre of the city of Pune is at the intersection of $18^{\circ} 31'$ N and $73^{\circ} 51'$ E. The city is 192 Km. south-east of Bombay by rail and 170 Km. by road. It is 549 m. above the sea level and about 100 Km. from the western coast.

The geographical setting of the city is well described in the Gazetteer of Bombay Presidency as follows :⁶

"On the right bank of the Mutha river is a slight hollow, the city and Cantonment are bounded on the west by the Mutha, on the north by the joint Mula-Mutha, on the east by their feeder Bhairoba Nala, and on the south east and the south, by the spurs and uplands that rise to the northern slopes of the Sinhagad Bhuleshwar hills ... On other sides except the Mutha valley to the south west the city and cantonment are surrounded by uplands and hills. On the northwest is the soilless Ganeshkhind upland and on the west are the rocky slopes of Chatushringi and Bhamburda hills bare waving ranges rise to the central peak of Bhamburda. To the south rises the low but sharp cut and picturesque temple crowned top of Parvati and behind Parvati the broken outline of Sinhagad - Bhuleshwar range."

Thus, Pune is on the plain surrounded by hills from 580 m. to 700 m. approximately. The city has a gentle fall of about 20 m. from south to north, being about 9.5 m. per km. Rivers in the region flow from west to east or from southwest to northeast. They are nonperennial.

As far as the geology of the region is concerned, the deccan trap basalt igneous rock is extensively found. In the regions of Yeravda, Chinchwad and Akurdi the hard compact tough and medium and fine grained non-vesicular type rock is found.⁷ The vesicular type are comparatively soft and break more easily. These are subject to weathering and are known as boulders, which are commonly found near hills. Building stone, another type of igneous rock is also found everywhere. Prismatic and columnar joints is another common feature.⁸ Along the rivers, the soil is deep fertile and black. It is largely brown-copper coloured in the west and blackish to the east.

Pune being at a high altitude, on the eastward slope of the western ghat, the climate is dry, breezy and invigorating. It has all the three seasons - winter, summer and rainy. The city has about 50 rainy days a year, and the annual rainfall touches about 715 mm. The rainfall is not even. In the Khadakwasla catchment area, about 25 km. southwest to Pune, it is 6,350 mm. The lowest recorded temperature in the city is 4° C in December and maximum is 36° C in April and May. On rare occasions, it has touched or even slightly crossed 40° C in the hot seasons.

The city of Pune is directly connected by various transportation links to other part in the district, state and the country. It has a civil airport at Lohgaon, about 15 Km. north-east of Pune, and there are regular commercial flights to Bombay, Delhi, Bangalore, etc. The city is situated on the National Highway No. 4, connecting Bombay with Bangalore via Pune and further to Madras. The highway enters Pune from northwest and goes southwards in the direction of Satara, Kolhapur, further to Bangalore. At about 10 km. from Pune on the NH 4 in the direction of Bombay, near Kasarwadi, the National Highway No. 50 branches out in the direction of Nashik to the north. The National Highway No. 9 originates from Pune towards Solapur and further to Hyderabad in Andhra Pradesh. It goes eastwards via Hadapsar. Within the city limits, there are a few state highways, the one going in the north-eastern direction goes via village Wagholi to Ahmednagar, which further goes to the interior of the State. The state highway going in the southwestern direction passes through village Vadgaon Khurd and goes to Khadakwasla and further to Panshet. The state highways going westward go to Mulshi and Pashan respectively.

Pune junction is one of the major junctions in the railway map of India. It lies on the Bombay-Madras broad-gauge line. The railway line enters the Pune city limit from the northwest and goes in the direction of Daund

eastward. Pune also has another rail link southward, i.e., the broad gauge line to Miraj, having further metre gauge links to Bangalore and Goa and a broad gauge branch to Kolhapur from Miraj. This link was originally a metre-gauge one and was converted into broad gauge in 1971. Pune is thus having direct rail linkage to Bombay and thus further to Gujarat and Rajasthan, to southern India via eastward and southward rail-links; to central and northern India through Daund which further goes to Bhusawal and northwards and from Bhusawal junction to eastwards.

2.4 Functional Zones

Two developments in the recent past have acted as functional factors in bringing about a typical functionwise distribution of Pune city. The first one was the Panshet floods of July 1961 and the second one was the industrial expansion in Pune coupled with the increase in the transportational facilities.

On the eve of the Panshet dam disaster the city showed well defined functional zones as follows :

- 1) Western Pune had majority of educational institutions, it was mainly a residential area of a comparatively recent origin and inhabited by higher class and higher middle class population, with low density of population.
- 2) Nana Peth and Bhawani Peth areas were areas of

commercial and trading activity, mainly due to proximity to Pune railway station and links through Satara road and Solapur road.

- 3) Shanwar, Narayan and Sadashiv Peths were the traditional residential areas with high density of population.

The Panshet floods not only boosted the extensive growth of the city but it resulted into suburbanization of the city. The growth of city's population was both a cause and effect of this development. Vertical occupation increased in the traditional houses in the old residential areas of the city, such as Raviwar Peth, Budhwar Peth, Shanwar, Narayan, Sadashiv Peth, etc. This further pushed up the density of population in the city after 1961. Residential areas also were extended to the southern direction right upto the village Dhankavdi and Katraj, in the north western direction upto Bhosari and Akurdi (through the Pimpri-Chinchwad municipality - later corporation area), in the western direction to Aundh, Baner, Pashan, Kothrud; in the eastern direction upto Mundhwa and Hadapsar, and in north-eastern directions upto village Wagholi. Formerly all these surrounding villages were mostly cut off from city; but recently the urban population in those villages increased. Road connections and municipal transport services increased the daily commuting population to the city. The daily

commuters also emerged from the places along the rail links in all the directions, and also along the national and state highways from all the directions. The radius of the commuting traffic got extended upto even fifty km. in all the directions. The economic effect of this kind of suburbanization was that the labour supply to the city started emerging from all these areas. The occupational structure of villages and settlement areas around Pune changed gradually from predominantly agricultural occupations to non-agricultural occupations. In other words, intra-urban mobility increased to a great extent.

2.5 Population

The census of India always made efforts to present the data of the urban population in the country especially in a more meaningful and functional manner. In the 1961 census the concept of 'town group' was evolved. In 1971, the same term was replaced by the urban agglomeration (UA) and standard urban areas (SUA). Pune has been classified as having a standard urban area. The SUA is a potentially urbanization compact territory around a core town having the population of at least 50,000 as per 1971 census. It includes those areas which are expected to develop into fully urbanized territory by 1991.⁹

Thus, Pune standard urban area had 13 constituents in 1981 as against 9 in 1971. The 13 constituents showing

urban components were : Pune City Municipal Corporation, Pimpri-Chinchwad City Municipality,¹⁰ Pune Cantonment, Kirkee Cantonment, Dehu Road Cantonment, Talégaon Dabhade Municipality, Hadapsar, Lohagaon, Khadakvasla, Vadgaon Sheri, Sangvi, Haveli, Kalas, Dehu.¹¹

The changes in the population are shown in Table 2.1.

Table 2.1 : Growth of Population

Year	Maharashtra		Pune District		Pune City	
	Total	% decade change	Total	% decade change	Total	% decade change
1951	3,20,02,564		19,50,976		4,88,419	
1961	3,95,53,718	+23.60	24,66,880	+26.44	6,06,777	+24.23
1971	5,04,12,235	+27.45	31,78,029	+28.83	8,56,105	+41.09
1981	6,27,84,171	+24.54	41,64,470	+31.03	12,03,351	+40.56

Source : 1. Statistical Abstract of Maharashtra State, 1981-82, Government of Maharashtra, Bombay, 1986.

2. Socio-Economic Review and District Statistical Abstract, Pune District, 1981-82, Government of Maharashtra, Bombay, 1985.

3. Census of India, 1981, Part II-A, Maharashtra, Manager of Publications, Delhi, 1983.

Notes : The increase in population of Pune City is due to the population growth, net migration into the city and also, marginally due to changes in the area of the Municipal Corporation of Pune. It had the area of 132.09 sq.km. in 1961, 138.85 sq.km. in 1971 and 138.76 sq.km. in 1981.

The Table 2.1 noted above reveals the fact that the average decadal growth rate of the state population was 23.60%, 27.45% and 24.54% during the last three decades respectively. But the same for Pune district exceeded the corresponding figure for the state. The corresponding growth rates for Pune district were 26.44%, 28.83% and 31.03%, respectively. The growth rates during the last three decades for Pune City population work out to be 24.23%, 41.09% and 40.56%, respectively. Thus, the growth rates for Pune city were the highest, not only comparatively but even absolutely. Apart from the natural increase in population, the Pune City population also increased due to net migration into the city. As made clear earlier, use of the land within the city and adjoining areas for residential purposes, increased intra urban mobility due to public and private transportation and personal transportation have contributed largely to this kind of increase in the population of Pune City. During the same three decades, the population of Pune urban agglomeration comprising of 13 urban components noted above increased at the average rates of 30.60%, 43.53% and 48.55%, respectively. The upshot of the entire argument is that the Pune City and surrounding areas are absorbing the migrations from the outer areas at very higher rates. According the same census report of 1981, the census of increase in the city population, especially during the last census decade is

growth of 'Industry and service'.¹²

2.6 Literacy

The literacy figures are shown in the Table 2.2 below :

Table 2.2 : Growth in Literacy

Year	Maharashtra	Pune district	Pune City
1961	29.82	34.31	56.06
1971	39.13	44.62	63.07
1981	47.18	54.03	67.40

- Source :
1. Statistical Abstract of State of Maharashtra 1981-82, Bombay, 1986.
 2. Economic Survey of Maharashtra, 1985-86, Bombay, 1986.
 3. Socio-Economic Review and District Statistical Abstract of Pune District, 1980-81, Directorate of Economic and Statistics, Bombay, 1984.

The population of Pune City certainly has a higher literacy percentage than the district population or the state population. The urban nature of population with a larger number of educational institutions accessible to urban people naturally push up the literacy rate of the Pune city.

2.7 Industrial Profile

The industrial activity in Pune was not worth any mention in the eighteenth century except that a few earthenware, pot making and maintenance - repairs activity of iron tools, wooden tools and implements were in existence. The last quarter of the eighteenth century and first quarter of the nineteenth century saw some decline in industrial activity due to great upheavals in the social-political life of Pune city. The year 1818 saw the end of Maratha empire. In 1826, an attempt was made by Capt. Robertson, to rear silk in Pune.¹³

Spinning, weaving and grain dealing activities generally expanded after 1830's. By 1850's, the competition from machine made fabrics from England was acutely felt and cotton textile activity suffered a set back. Next to agriculture, textile was the next important activity and thus a few decades after 1850 saw the decline of industries in general.¹⁴

The decade 1880-90 witnessed a slow rise of silk cloth manufacturing and handloom cloth manufacturing activity in the city. The working class started emerging gradually when a paper mill and a textile mill were established in Pune.

During the twentieth century, it was the first world war which gave a boost to the industrial activity in Pune.

The same trend continued during the mid-war days and also during the post-war period. As noted earlier in the chronology of events in Pune in the second part of the previous century and through the present century, the industrial development in and around Pune, slowly and certainly, took firm roots at the time of Independence. The profile of industrial products changed from metal products, utensils, paper and textile to manufacturing chemicals, heavy engineering, vehicles, electronics, light engineering, plastics, rubber goods, etc. The decade of 1940-50 paved way for rapid industrial expansion and diversification. The nature, direction and rapidity of these changes continued in the subsequent decades. The city of Pune emerged as a prime producer of products like oil engines, pump sets, industrial machinery, cables, pipes, hoses, electric goods, transistor s, heavy machinery, compressors in India. The Government of Maharashtra, through its policy of industrial growth and dispersal established industrial estates at Hadapsar, Bhosari, Gultekdi, Loni, etc. The industrial giants in India, such as Tata Engineering and Locomotive Co., Kirloskar Brothers, Kirloskar Cummins, Philips, Cooper, Walchand Group, Sandvik Asia, Bajaj proved instrumental in bringing about rapid and diversified growth of industries around Pune.

Two factors, mainly responsible for this change can be cited. The relentless efforts of industrial houses

of Kirloskars, Coopers, Garwares, Tatas, was a factor that contributed positively for this industrial change. Another factor responsible for these changes is the growth of tertiary sector in the city of Pune. The growth of banks, especially Bank of Maharashtra, insurance companies, transport companies, schools and colleges proved to be conducive, directly and indirectly for rapid industrialization in and around Pune.

The linkage of these industrial changes with the printing industry is obvious and can hardly be over-emphasized. The industrial growth multiplied the demand for industrial literature, technical literature, promotional literature, packaging material, printed stationery such as invoices, letterheads, etc. The volume of printing work undertaken in and around Pune multiplied and diversified very rapidly during the decades after the second world war.

NOTES AND REFERENCES

1. This section largely draws from : D.R. Gadgil : Poona - A Socio-Economic Survey - Part I - Economic, Gokhale Institute of Politics and Economics, Pune, 1945; and Regional Plan for Poona Metropolitan Region, 1970-1991, Part I and II, Poona Metropolitan Regional Planning Board, Poona, 1970.
2. D.B. Parasnis, Poona in the Bygone Days, Poona, 1921, p. 78.
3. Maharashtriya Dnanakosha, Vol. 17, p.140.
4. Census Report, Bombay, 1917, p.11.
5. The detailed account of these developments can be had from : डॉ. मा.पं.मंगडकर (संपा.) पुणे नगरसंस्था ज्ञानाब्दी ग्रंथ, पुणे महानगरपालिका, पुणे १९६०.
6. The Gazetteer of Bombay Presidency, Vol. XVIII, Part III, 1885, p.267.
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9. Census of India 1981, Series 12 Maharashtra, Part II-A, Manager of Publications, Delhi, 1984, p.213.
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CHAPTER 3

HISTORY OF PRINTING INDUSTRY IN PUNE CITY

3.1 Introduction

The act of communication has grown since time immemorial. As man started uttering words, the languages developed in the world. The stage when alphabets developed, the need for writing was further felt. When writing evolved, the need for multiple copies was felt, and this made for a beginning in the art of printing.

It is believed that the art of printing first developed in the east. By about 100 A.D. a Chinese, Ts'ai Lun invented paper.¹ Chinese were also responsible for inventing block printing by 650 A.D. A book entitled, 'Hirak Sutra' was discovered in China in 1907 and is believed to date back to 868 A.D. This is said to be the oldest printed book so far known.²

3.2 Europe

Johannes Gutenberg perfected the skill of casting movable metal types. Though by 1045 A.D. Chinese made the first block printing, the use of movable type did not develop in China because the Chinese language has thousands of different characters. By 1456, Gutenberg printed the famous 42-line Bible, the first printed book in modern times. By 1500, there were about 1000 printing presses in

Europe. The art of printing reached England in 1477, Russia in 1553, U.S.A. in 1640, and India in 1556.

From Portugal, a printing press was sent to Abyssinia, but was diverted en route and it landed in Goa on 6th September 1556.³ Initially it was the spread of Christian literature which got precedence over other objectives while putting the act of printing to use. Evidently, the first known printed matter in India was a pamphlet entitled CONCLUSOES, meant for issuing instructions at Church. In 1557, the first book printed in India, entitled DOCTRINA CHRISTAA was released. But the copy of the same is not available at present. The first available book printed in India is COMPENDIO SPIRITUAL, printed in Goa in 1561. Thus, after the invention of the art of printing with movable types in the West in 1456, after about hundred years, the art of printing emerged in India.

3.3 India

It is true that India picked up this art rather slowly. The primary reason for this was belated renaissance movement which gathered momentum in India only in the sixteenth and seventeenth century, unlike Europe, where it spread by fifteenth and sixteenth century. Besides, the number of letters - characters in Indian languages - was enormous, as against English or French, where the number of characters is limited. For instance, Fr. Stephens, in

a letter of 5th December 1608 writes from Salsette, Goa :
 "Because it looked impossible to cast so many moulds amount-
 ing six hundred, whilst the characters are syllables and
 not alphabets as our twenty four in Europe..."⁴

The first Indian book printed in India in any Indian language was in Tamil, which appeared from Quilon in 1578.

Apart from the reasons noted above, of the belated start of printing activity in India, the apathy of the natives was also an important reason. Several writers and historians have criticised this apathy about learning new arts, skills and techniques of communications. Prominent among them was Mr. V.K. Rajwade who was surprised as to how the Marathas were not curious enough to learn printing art from the British.⁵

A notable exception to the above observation was Nana Phadanavis, the Brahmin diplomat from the Peshwa Darbar from Pune, who made all the arrangements to print the Bhagvadgita with copper blocks in the last decade of 18th century. Due to political upheavals reigning in Pune in those days, the project could not be completed then. The same was completed at Miraj in 1805. The printed copy of the Bhagvadgita is available at present and the copper blocks are preserved with the Bharat Itihas Samshodhak Mandal, Pune. This was certainly a promising attempt to perfect the printing art in this province; but after all

it was a block printing. The use of movable types for all sorts of purposes was yet far away.

The art of printing in the Bombay province can be traced back to 1670's when one Bhimjee Parekh made efforts to print ancient Indian writings. Records also are available to suggest that he also wanted to develop Gujarati letters ("Banian characters").⁶

Mr. N.G. Madgaokar has recorded the existence of some kind of printing activity in Bombay in 1780.⁷ A book entitled, Calender for the Year of Our Lord 1780, comprising of 32 pages was printed by Mr. Rustom Kersasjee in 1780.

Dr. William Carry (1761-1834), the teacher of Sanskrit, Bengali and Marathi languages in the College of Fort William (Bengal), was the first to print a book in Marathi, in Devnagari script in 1805 at Serampore in West Bengal near Calcutta. Carry printed books in Sanskrit and Hindusthani (Hindi) also and made efforts to cast metal types in Devnagari script. His attempts to print in Persian and Arabic scripts met with a fair degree of success too.

3.4 Bombay Presidency

The printing skill, on the professional scale reached Maharashtra, (i.e., the then Bombay Presidency) in the first quarter of the nineteenth century. Newspapers, educational books and religious literature were the only

products handled by printing presses in those days. In Bombay, the Courier Press, established in 1805 printed newspaper in English, and Bombay Samachar was printed in Gujarati. Printing in English used the letterpress techniques, while newspapers in Marathi still used the traditional litho-presses. Use of movable types in Marathi was introduced by Thomas Graham in 1836. For speedy, standardized, and elegant printing in Marathi, separate type foundries were needed. The first type foundry for Marathi printing was perfected in 1843.

In Bombay, in 1820, Bombay Education Society was founded to encourage and spread education 'especially for the natives in native languages'.⁸ Preparing and printing and publishing of books received momentum in 1820's. Bombay and Pune were the places leading in the spread of printing industry, in early days. Up to 1856, the American Mission Press in Bombay was far ahead of all the presses in turning out highest number of books. Between 1856 and 1869, the efforts of Mr. Ganpat Krishnaji, a contemporary of Thomas Graham, bore fruit and the former successfully cast movable metal types and also manufactured printing ink. Two important inputs of the printing industry, type and ink, could then be manufactured in India by 1850's.

The years between 1869 and 1912 are known as the age of the Nirnaysagar Press.⁹ Even though sophisticated machinery was not at hand, and formal training was lacking,

a band of devoted printers and typefounders from Nirnaysagar Press, Bombay, could evolve several new type faces in Devnagari script. Hundreds of books in elegant and extremely readable style were popularised by this press. The variety of printed products got diversified from only school books and religious literature to periodicals, dailies, anthologies, almanacs, novels, science books, calenders, grammar books, maps, etc. The relentless and missionary zeal of the Nirnaysagar could contribute a lot for the spread of knowledge in Western India. It was those days which enabled the printing industry to establish its own identify.

All was not so smooth going when the printing activity was gradually growing by the middle of the 19th century. Since the spread of the art of printing was to prove conducive to rouse political consciousness among Indians in those days, government attitude towards press was that of apprehension and British thought that it involved great political risks. But some statesmen like Elphinstone took a progressive and liberal view and helped spread of schools and literacy. This indirectly gave a boost to the printing activity.

It is interesting to note that some Indians too opposed the development and growth of printing activity in the initial stages, though for altogether different reasons. Some social leaders opposed the printing activity

because of the fact that the printing ink contained animal fat as one of the ingredients. Printed literature especially of religious nature was not touched by the orthodox Hindus. To overcome this kind of embarrassing situation, some printers made it a point to declare on the front page of the book that the ink uses 'pure ghee' and not animal fat as the ingredient.¹⁰

Earlier phases of the development of printing industry saw books and periodicals as the major products from the industry. Spread of liberal education and renaissance movement dominated this period and thus the second half of the nineteenth century has been termed as the 'age of bloom' of publishing industry, suggesting thereby the consolidation of publishing industry.¹¹ Since the industries were yet to be developed on the large scale, books and periodicals were the major products of the publishing industry. Thus, the second half of the nineteenth century can also be called the age of consolidation and expansion of printing industry.

The Books Registration Act of 1867 was a step in the direction of the consolidation of publishing industry. Consequent to this act, it was obligatory on the part of every printer to submit 5 copies of each book to the Government before the expiry of one month from the date of publication. The motive behind this act was to be on the lookout for seditious writing. But it was a blessing

in disguise for the book industry or publishing industry in this province. This enabled the automatic enlisting of all the books published. Study, research and learning became easier due to the provisions of this act.

3.5 Printing in Pune

The first printing press in Pune dates back to 1830. Though in earlier decades of the last century the city of Bombay was leading in the educational developments, Mounstuart Elphinstone, who had spent most part of his career in Pune made efforts to start this activity there. Capt. Jervis was associated with the Government lithographic establishment in Bombay in 1829. In the following year, in Pune the Government Engineering College was established and Capt. Jervis was transferred to Pune as a teacher in the College. He carried the lithographic press with him to Pune and that was the first printing press established in Pune.¹² The press ran under the title Poona Pathshala Press. Even though Jervis returned to England the following year, the press existed under some different arrangement till 1850's and brought out several books on science, physics, arithmetics, etc.

Mr. N.V. Joshi has described the life in Pune in his book published in 1868. He records that "in Pune two periodicals were available - Dnyanaprakash and Prabhakar. -The book-stalls in the town had majority of books in

English, followed by those in Sanskrit, Gujarati, Hindusthani, Marathi, Kannada, etc. The town had 7 printing presses, out of which 2 did English work."¹³

It will be instructive to note some important landmarks in the history of printing industry of Pune City. It is already emphasized that a very logical, convenient and desirable backward linkage of printing industry is to undertake type foundry activity to cast type for speedy and high quality printing. The type foundry for printing industry is a team-work of designers, calligraphers, metallurgists, type founders. Due to low industrial development in the country upto the end of the last century, the type casting activity was in a low profile. High degree of precision is required in type casting and since the machinery of the expected variety had not developed, this activity showed a slower momentum. This had a demand dimension too. Till the turn of the last century, the printing industry mainly carried out book printing, printing of religious literature and educational printing. Commercial and industrial publication had yet to make its headway on the industrial scene. Only after the First World War, and that too after the success of the Swadeshi movement in this part of the country, that the commercial printing found its birth and identity in this industry. Advertisements, packaging, promotional literature after 1920's required a wide variety of types and thus this

activity gathered momentum only in the first quarter of the twentieth century.

This brief survey will remain incomplete if a reference is not made to some forerunners of the type-casting branch of this industry. Composing in degree type was time consuming, complicated and was liable to high incidence of mistakes. Devnagari type in the mono-form increases speed of composing, but was still more bulky to stock and handle. To set the Devnagari script to composing machines (either monotype or lino types) was the correct step to bring about a technological break through in the composing branch of the printing industry. This would revolutionize the newspaper industry as it would handle a substantial quantity of composing work daily. Lokmanya Tilak, in association with the renowned Nirnaysagar Press from Bombay, made pioneering efforts for setting Deonagari script to mechanised lino-composing machine in 1904. These efforts reached perfection at the hands of Mr. Shankar Ramchandra Datey from Pune who could successfully set the Devnagari script in 1933 to the monotype mechanical composing machine, thus overcoming great hurdle in typography of Marathi language. This was a measure to reduce the time taken in the composing section and thus it revolutionized the printing art and technique.

The second half of the nineteenth century recorded a continuous growth in the number of printing presses in Pune.

In the year 1877, Mr. Vishnushastri Chiplunkar, the great educationist and social reformer, established the famous Chitrashala Press, which later on went to complete about hundred years of its fruitful existence. The Dnyanaprakash Press was started in February 1849. Till 1864 the periodical was lithographed, and then it was printed. From 15th August 1904 it turned from weekly to daily. It ceased publication in 1951. In 1909, the Servants of India Society, an organisation led by moderates like G.K. Gokhale, obtained the proprietary rights of Dnyanaprakash.¹⁴ In 1875-76, Pune had 23 printing presses, including 4 government presses, viz., the Revenue Press, Photozinco Press, City Jail Press and Municipal Press. Deenbandhu Press (estd. 1873) is the oldest existing press in Pune today.

Another significant milestone in the march of printing industry in Pune was the establishment of Poona Press Owners' Association in May 1919. Between 1919 and 1929, the Association functioned actively. The Association made representations to the government regarding various problems faced by the industry immediately after the First World War. Views of the industry regarding various acts then passed were conveyed to the government. Due to the Great Depression of 1929-33, the printing industry also faced recessionary situation. The Association function came to a standstill. In January 1939, the activities of the

Association were revived. In 1937, All India Printers' Conference was held in Pune, which was probably the beginning of the All India Federation of Master Printers. In January 1938, the first ever periodical devoted to the printing and allied industry Mudran Prakash (in Marathi) appeared for the first time.

During the Second World War days, the Association made available the scarce raw material like paper, kerosene at controlled rate. The Association was largely responsible in forwarding petition against the Paper Control Order issued by the then Government in June 1944. In September 1945, the Association opened a store, dealing with print aids, print material, stationery, raw material, machinery, binding material and paper. The profit generated through the store is ploughed back and is used for educational purposes.

The city of Pune also has been the pioneer in imparting teaching and training facilities in this craft. One such school, associated with the famous Pune Vidyarthi Griha has been functioning since 1929. Another school in Pune also imparted practical training in some branches of the industry (such as hand composing and proof correction) through its earn-as-you-learn scheme. For the last two decades or so, the city had facilities to offer certificate and diploma courses in Printing Technology and from 1985 the degree course also has been introduced.

The Poona Press Owners' Association also has to its credit the publication of about 20 books in Marathi about various theoretical and practical aspects of printing industry. The publication wing of the Association was opened in 1960.

The State level Federation of the Printers' Associations was formed in the State of Maharashtra under the title Maharashtra Mudran Parishad in 1949. The first session of the Parishad was held in January 1949 in Pune. The Parishad has been a representative body linking the Government and the industry. Out of several resolutions passed at the sessions of the Parishads, some have been acted upon and consequently they have been in the interest of all the parties, i.e., labourers, press owners, Government and the society as a whole. To name a few resolutions which have been implemented:

- 1) Sales tax on printed books be abolished.
- 2) Teaching of printing be introduced at the school and university levels.
- 3) Apprenticeship Act be applied to the Printing industry.
- 4) Printing trade be introduced at the Industrial Training Institutions.
- 5) Printing competitions be held at the State level.¹⁵

The Parishad also published from Bombay a periodical entitled MUDRA since 1961.

In addition to the Printers' Association, the city of Pune also has, Blockmakers' Association, Lithographers' Association and Paper Traders' Association.

While it is true that the printing industry has been showing a continuous growth and expansion for the last many decades, an important stage was achieved when Prof. D.R. Gadgil attempted a Socio-economic Survey of Pune. The same was carried out in 1936-38 as far as the investigational part was concerned, and the Report was published in 1945.¹⁶

Prof. D.R. Gadgil has recorded¹⁷ the existence of 56 printing presses in the city of Pune.¹⁸ The degree of underestimation can be regarded to be minimum. As far as the location of presses went, the city had 55 presses and suburbs had only 1 press. The large share of them was in Sadashiv Peth and Budhwar Peth, with 16 and 10, respectively. It is worth mentioning that both of these areas were predominantly residential areas, with Budhwar Peth showing some admixture of commercial activity then. If the number of workers is taken as the indicator of the size of the press, it can be said that the printing industry in Pune was dominated by small firms. Only 1 press had workers exceeding 100. The classification of industrial establishments in Pune in 1945 was as follows :

Table 3.1 : The Printing and Allied Activity in Pune by 1940

Industry Group	Total Establishments in Pune City and suburb	Total workers engaged
1. Paper, Printing and Stationery	84	1,226
2. All Industry Groups	1,565	7,324

Source : Gadgil, op. cit.

The statistics of printing industry is not available separately, but similar trades of paper manufacturing, printing and stationery have been clubbed together in the Table noted above. Thus the Table gives an approximate strength of this industry group vis-a-vis all the industrial establishments in Pune then. This group, it is evident from the Table, had 84 out of 1565 total industrial establishments. This works out to be 5.37 per cent of the total; but it employed 1226 of 7324 workers, which works out to be 16.74 per cent of the total. The average number of workers employed per printing establishment works out to be about 15 as against about 5 in the case of all industries in Pune city. But it must be repeated that the number of average workers per establishment includes paper industry also, which is more labour intensive than printing industry.

Before the survey of printing industry proceeds to the period after Independence, it is worth mentioning the Government sector's activities in this industry. Prior to 1947, there were 3 printing presses owned and controlled by government, one at Bombay and 2 in Pune - Yeravda Prison Press and Government Photo Zinco Press, Pune. The former was established in 1866 and the latter in 1967.¹⁹

The post-Independence era witnessed alround growth of the printing industry in general and that in Pune in particular. The city of Pune was always in the forefront of educational and cultural pursuits in the state. The same was to enable Pune to become the leading centre of book-printing in the State, perhaps in western India. In fact, the period 1950-1970 has been termed as the Golden Age for printers.²⁰ It was the age of rapid expansion, high profitability and consolidation, backed by the patronage of text book printing business. Printing of text books by private publishers and printers allowed stability, high profit margins and expansion and diversification of the printing industry.

Expansion of commercial and industrial printing business was complementary to the development mentioned above. As explained earlier, the post-war years, marked a very rapid increase in the industrial activity in Pune. Increasing demand for printed products for advertisements, marketing and packaging was experienced by the industry.

Speed, quality and variety of the product improved considerably during this period. Many presses switched over from traditional machines to automatic machines, from letter-press printing to more sophisticated offset printing. Text book printing acted as the backbone to all this development.

The year 1956 was the most eventful one for the printing industry. From 1st May 1956, minimum wage act was made applicable to printing industry. From August 1956, sales tax was made applicable to this industry too. These two acts had direct impact on the activities of printing industry.

The decade of the 1970's and succeeding period saw sea-changes in printing industry. It had to face several new problems and had to accept new challenges. The State Government took over the school text-book printing and publishing business. In 1969, the first text book was published by the Maharashtra State Text Book Bureau. The printing presses which survived the text-book printing by the Government, with huge machinery and high turn over, suddenly found themselves deprived of their business. This made the very foundation of private printing industry rather shaky. When by 1970 about 90 per cent of the book printing business in the state was concentrated in Pune, the printing industry in this city was the first to receive this jolt. Consequent on this shock to the foundation of

the major part of printing industry, the move to expand and diversify through technological improvements got arrested for some time.

The year 1973 gave two further shocks to printing industry. The year saw the culmination of the period of uncertainty and a vacuum-type situation created due to the loss of text-book printing business by private printing industry. The main raw material to the industry - paper was the most scarce commodity for some time and the price of paper was very rising rapidly, causing hardships to the printing firms. The printing firms indulged in tougher competition for want of printing work.

In 1968, workers from some leading printing presses had put forward their demands for higher wages and allowances and had gone to the Industrial Tribunal for the resolution of their demands. The tribunal awarded judgement in November 1972 and was published in the Government Gazette in February 1973. The dispute had 12 printing presses from Pune involved in it, most of them major ones, employing about 80-90 workers. The demands of workers were accepted to a large extent by the tribunal and the revised wages were made applicable from the 1st of March 1969. No time was allowed for arrears to be paid and they were to be cleared immediately. A writ petition was filed in the Bombay High Court; but in July 1973 the decision of the Industrial Tribunal was largely upheld by the High

Court.

The immediate implications of the award for printing industry were disastrous. The private press owners involved therein had to pay in total amount of about Rs. 10 lakhs as arrears of wages to workers. Depending on the recommendations of the Tribunal, wages of workers suddenly increased by 60 to 85 per cent. This further implied that the printers had to increase their rates for printing jobs by about 30 per cent to 40 per cent overnight. Consequently five private presses from those involved therein closed down and one curtailed its business substantially. Four hundred workers were rendered unemployed by May 1974.²¹ In the history of printing, not only in the city but even in the state, this was one of the serious setbacks dealt to the industry until then.

Some general observations on this background need not be overlooked.²² It was urged that the award did not think fit to take into account the paying capacity of printing industry. The award was applicable to workers from the printing presses in question only. The revision in wages was applicable in their case only. This discriminated workers from other presses, who had no advantage of revision in wages.

Still more interesting was a sequel to the award of the tribunal. On the lines of the Tribunal award, in December 1974, the Bombay High Court passed a similar

judgement in the case of one more press, recommending steep upward revisions in wages. The press went into an appeal. The judgement was delivered in May 1975. It largely set aside the award of the tribunal and also the judgement of the Bombay High Court. The Supreme Court observed, "The question of capacity to pay is irrelevant in the case of minimum wages (but) in the matter of fair wage, besides the principle of industry-cum-region, the company's capacity to bear the financial burden must receive due consideration."²³ The learned judges of the Supreme Court also observed further that the tribunals (of Maharashtra) adopted absolutely wrong approach and resulted in erroneous conclusions.²⁴

The observations of the Supreme Court are self-revealing and hardly need any comment further. But one observation is necessary. The 1974 closure of presses in Pune inflicted severe blow to the printing industry in the city and had an extremely demoralising effect on the industrial atmosphere in Pune for many days thereafter.

In the days of unprecedented developments on the labour front, the November 1973 shock of overnight multiplying of prices of petroleum products only made matters worse. Paper became still more scarce, prices increased steeply in a short while, the products like kerosene, lubricating oil, etc., also cost substantially more.)

During the last decade, printing industry is showing a general recovery and expansion as far as the printing activity was concerned. This, undoubtedly is the reflection of the generally good economic conditions prevailing in the country with expansion in trade and commerce, overall increase in literacy in the economy, comparatively easy situation on the front of availability of paper, use of electronics in the printing techniques, advent of xeroxing machines and business machines so on and so forth. Many of the innovations are yet in the initial stage and it is too early in the case of some of them to assess objectively their role vis-a-vis printing industry.

Against the background of the historical developments noted above, the present study will proceed to probe into the economics of printing industry in Pune city.

NOTES AND REFERENCES

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CHAPTER 4

PRINTING INDUSTRY - LEGAL INFRASTRUCTURE

4.1 Introduction

The printing industry, like any other industry, has to function within a certain legal framework. A series of legislation has been enacted by central and state governments in the past few decades. The progress of these legislations has been remarkable, especially since independence.

The Constitution of India guarantees fundamental rights to citizens and also lays down certain Directive Principles of state policy for the achievement of a society based on the principles of Justice, Liberty, Equality and Fraternity. Article 14 of the Constitution lays down the equality before the law. Labour is in the concurrent list of the Constitution on which both the Centre and the States have power to make laws. Articles 39, 41, 42 and 43 play crucial role in the field of industrial legislation and adjudication. Article 39 paves the way for implementing socialist principles laying down the principle of equal pay to men and women. Article 41 says that the state will do its best to provide right to work, education and public assistance in case of sickness, old age, unemployment, disablement, etc. Article 42 tries to guarantee humane

and just conditions of work and maternity benefits. Article 43 makes it obligatory for the state to secure for workers a living wage, conditions of work for a decent standard of living, etc. Article 43A makes provision to secure workers' participation in management of undertakings and industrial establishments. In addition to the constitutional provisions, the Directive Principles of the Constitution are the sheet anchor of the legislation for the welfare of the working class. The National Commission on Labour observes that, "in accepting the Directive Principles, the country is committed ethically and morally to see that the governance of the country is carried on with a view to implementing these Directive Principles in course of time."¹ The case of Employees' State Insurance Act 1948, can be illustrated here. It is a legislation to guarantee social insurance. It seeks to provide sickness benefit, maternity benefit, disabled benefit in cash and also medicines in kind. Thus, the legal framework in our country seeks to achieve simultaneously social welfare, industrial harmony and productivity.

The Central Government and the state of Maharashtra have both passed several legislations in the past few decades, showing progressive outlook for peaceful industrial environment in the state. This legal infrastructure aims at protecting labour from exploitation, improve working conditions of workers, increasing labour welfare and

ensuring flexible mechanism for settling industrial disputes. When disputes arise, attempt is made, through legislations, to settle them amicably and speedily. The classification of legal provisions existing in the state can be given as follows :

1. Legislation about Employment and Training, which includes, for instance, the Apprentices Act 1961.
2. Legislation on Working Conditions; the backbone of it is the Factories Act of 1948 and this category has about six more acts.
3. Legislation on labour management relations, which mainly has Industrial Disputes Act of 1947 and about four other acts.
4. Legislation on wages, earnings and social security, which has Minimum Wages Act 1948 and six other acts.
5. Legislation on welfare, which has Bombay Labour Welfare Fund Act 1953.
6. Miscellaneous legislations.

This resume will discuss briefly those legal provisions and those acts which are applicable to printing industry.

4.2

Every printing press is governed by initially the Bombay Press and Registration of Books Rules, 1923. As per the Rule 3, every press-owner has to sign a declaration before the Additional Magistrate or District Collector

(Home Branch) as per the following format :

I, the undersigned ... residing at ... do hereby
state and declare that I am the Keeper of the
Printing Press, named as ... situated at ...

Age ... Caste ... Date ... Signature ...

Date ...

According to the provisions of this act, the printer is bound to submit a return to the Collector of the District, informing of the books printed by the printer during the preceding month, along with a copy of each book. Besides, it is also obligatory on the part of every printer to submit copies of the books printed at his press to Examiner of Books and Publications, Bombay, Central Library, Bombay, Central Library, Nagpur and Regional Library, Pune; within fifteen days from the publication of every book.

4.3

Shops and Establishment Act, 1948, was originally enacted by the State Government but was implemented by the local self governments. Since January 1979, this Act is implemented by the State Government. It is applicable to small presses, i.e., the presses not coming under the purview of the Factories Act. The press is supposed to submit the necessary information to the shop inspector as per the Form No. 3A. The Act limits the working hours to minimum 5 hours and maximum 9 per day but maximum 48

per week, mentions leave rules, makes it imperative on the part of the employer to pay over-time charges at double the normal rate per hour. Any changes in the number of employees are to be communicated to the shop inspector within a month. Those working for less than 5 hours per day are termed as part times and are kept out of the purview of this Act.

4.4

The Factories Act 1948 is applicable to those printing presses which employ ten or more workers with power or employs twenty or more workers without making use of power excepting mines, railways, etc. As per Section 85 of this Act, the State Governments have been empowered to declare this Act applicable to any premise not meeting these conditions. The Act provides specifications about ventilation, cleanliness, painting of walls, provision of drinking water, urinals, etc. An important provision of this Act is about the reporting of accidents. Any fatal accident or accident necessitating the worker to be away from work for more than 48 hours is to be immediately reported to the factory inspector. The factories are expected to file an annual return, list of holidays, six-monthly return, leave record, and list of substitute holidays. The Act also makes it obligatory on factories to report occupational diseases. The 1976 amendment of the Act made its scope more wide, to also cover the workers employed through contractors. The Act contains penalties

for offences according to these Act.

4.5 The Apprentices Act, 1961 keeps the object of "providing for the regulation and control of training of apprentices in trades and for matters connected therewith."² Nine trades within the printing industry have been covered by this Act. The Act stipulates a certain number of Apprentices per fixed number of workers already working at an establishment.

a. Handcompositor	1	Appren.	for every	7	workers
b. Lino Operator	1	"	"	7	"
c. Mono Operator	1	"	"	7	"
d. Mono caster	1	"	"	7	"
e. Machineman	1	"	"	7	"
f. Process Cameraman	1	"	"	5	"
g. Retoucher	1	"	"	5	"
h. Engraver	1	"	"	5	"
i. Binder	1	"	"	5	"

The Apprentices are entitled to receive minimum stipend as per the following rates :³

During the 1st year of training	Rs. 230 p.m.
During the 2nd year of training	Rs. 260 p.m.
During the 3rd year of training	Rs. 300 p.m.

Those who have completed some formal training at an industrial training institute are eligible for recruitment as an apprentice. The Act stipulates health, safety and

welfare measures, hours of work, leave holidays, etc.

"As many as 217 industries have been brought under the purview of the Apprentices Act and 138 trades have been designated for apprenticeship training."⁴

4.6

The Payment of Wages Act, 1936 is applicable to the whole of India. The Act has been amended in 1957, 1962, 1964, 1967, 1976 and 1982. The main purpose of this Act is to ensure regular and prompt payment of wages and to prevent exploitation of workers by prohibiting arbitrary fines and arbitrary deductions from their wages. By virtue of the last amendment made in 1982, wage-earners drawing Rs. 1600 p.m. have been covered under this Act. According to the provisions of the Act, the wage period shall not exceed a month, wages are to be paid before the 7th day after the month, where less than 1000 workers are employed, and before the 10th day in the case of other establishments. The Act permits deductions from wages only of certain specified kinds, such as those relating to (a) fines, (2) absences from duty, (3) for damages and loss, (4) for housing accommodations, (5) for amenities and services as specified by the State Government, (6) recovery of advances or adjusting overpayment of wages, (7) income tax, (8) payment of cooperative societies, (9) payment to provident fund, etc. The Act empowers the Inspectors to enter, inspect, search any premises and supervise payment of wages to employees.

In the State of Maharashtra, the Act is applicable to establishments covered under Bombay Shops and Establishment Act, 1948.⁵

4.7 The Industrial Employment (Standing Orders) Act, 1946 extends to the whole of India. Those establishments wherein 100 or more workers are employed are covered under this Act. The object of the Act is to regulate the conditions of recruitment, discharge, disciplinary action, holidays of workers. The employers are expected to define precisely the conditions of employment in industrial establishments and to make such conditions known to workmen employed therein. The main provisions of the Act relate to (i) procedure for submission of draft standing order, (ii) condition of certification, and (iii) date of operation and display of these orders, etc. The machinery for the implementation of the Act consists of the Certifying Officer and the Appellate Authority. In the State of Maharashtra, the Deputy Commissioner of Labour is the Certifying Officer and the Industrial Court, Bombay is the Appellate Authority.

4.8 The Minimum Wages Act, 1948 requires the appropriate Government, Central or State to fix minimum rates of wages payable to employees - skilled or unskilled, manual or clerical, etc. The Act provides for the fixation of - (a) a minimum time-rate of wages, (b) minimum piece rate of

wages, and (c) a guaranteed time-rate of wages for different occupations, localities or classes of work, etc. The minimum rate of wages may consist of (a) a basic rate of wage and cost of living allowance or (b) basic rate of wage with or without the cost of living allowance and the cash value of concessions in respect of essential commodities supplied at concessional rates, or (c) an all-inclusive rate. In the state of Maharashtra the Act is applicable to all the printing establishments, small or big. They were firstly brought in the ambit of the Act in 1955. The minimum wages, which were made applicable then, were revised in 1965, 1976 and in 1983. The wages as per this Act include basic wage, dearness allowance, house rent allowance and other allowances, but excludes provident fund instalment, tour allowance, gratuity fund amount, etc. The Act has classified workers into skilled, semi-skilled and unskilled. The minimum wages change from zone to zone, and also change skillwise. The A zone is the units of Greater Bombay. The ^{B-1} zone consists of Corporation and Council limits of Pune, Nagpur, Kolhapur, Solapur, Nashik, New Bombay, Thane, Pimpri, Chinchwad, Malavali, Ulhasnagar, Dombivli, Ambarnath, Kalyan, Kamptee, Deolali, Kirkee, Dehu Road and industrial estates coming within 15 Km. of these places. The B-2 zone comprises of Corporation, Council and Panchayat limits of Aurangabad, Akola, Amravati, Sangli, Wardha, Alibag, Nanded, Osmanabad,

Jalna, Latur, Ahmednagar. The C Zone consists of the rest of the state.⁶ A special allowance, which the Government revises upward every six months is added to the basic wage under this Act. The special allowance also changes from zone to zone.

- 4.9 The Payment of Bonus Act, 1965 is applicable to factories or establishments with 20 or more employees. The Act is applicable to all persons (except apprentices) employed on salary or wage not exceeding Rs. 2,500/- (as per the 1985 amendment). The minimum bonus stipulated is 8.33 per cent and the maximum to be 20 per cent.
- 4.10 The Industrial Disputes Act, 1947 (formerly the Trade Disputes Act 1929) provides a machinery for peaceful establishment of works committees to promote harmonious relations between the employers and workers. It introduced the principle of compulsory arbitration. It brought into being two new institutions: Works Committees in establishments employing 100 or more workers, and Industrial Tribunal for the adjudication of industrial disputes. The Act was amended in 1964, 1965, 1971, 1972, 1976, 1982 and 1984. The main provisions of the Act include works committees, conciliation and adjudication machinery, strikes and lockouts, lay-off, retrenchment and closure. The appropriate governments are authorised to appoint conciliation officers and to constitute Boards of

Conciliation or Courts of Inquiry, for setting industrial disputes. For adjudication, the Act provides a 3-tier system, i.e. labour courts, industrial tribunals and national tribunals; the jurisdiction of each office and functions have been defined by the Act too. The procedure for duration and enforcement of Awards and Arbitration has been laid down by the Act.

4.11 To supplement the provisions of the Central Act, some states have passed acts, and thus the Bombay Industrial Relations Act came into force since September 1947. Its object is to regulate relations between employers and employees and also to secure speedier settlement of industrial disputes. The Act was further amended by the Government of Maharashtra in 1964, and it provided a unified law under the title : The Bombay Industrial Relations (Extension and Amendment) Act 1964.

4.12 The Employee's Provident Fund and Miscellaneous Provisions Act, 1952; The purpose of the Act is to make some provision for the future of the worker after he retires or for his dependents in case of his early death. The Act is applicable to all factory establishments all over the country. By virtue of the amendment to the Act in August 1976, the Central Government has framed deposit linked insurance scheme to provide life assurance benefit to the employees covered under this Act. Legal action is taken against any defaulter of provident fund. The Act

now provides for compulsory imprisonment if an employer deducts the employee's share of provident fund for 3 months and does not deposit it in the accounts of provident fund organisation. The scope of the scheme has been extended to 173 industries and classes of establishments as by the end of 1984 when initially in 1952 the scheme started with only scheduled industries. The Act provides that the amount standing to the credit of any member of the fund shall not be liable to attachment under any decree or order of any court.

- 4.13 The Workmen's Compensation Act 1923 is one of the major Acts guaranteeing social security to workers. The Act imposes an obligation on employers to pay compensation to workers for accidents arising out of and in course of employment, resulting in death or total or partial disablement. Compensation is also payable for some occupational diseases contracted by workmen during the course of their occupation. Workers whose income per month does not exceed Rs. 1,000 are covered by this Act. Originally this limit was Rs. 500 per month but by an amendment of 1976, the limit was raised to Rs. 1,000/- p.m. Management and administrative staff has been excluded from this. Establishments where the Employees' State Insurance Act is applicable, this Act is not applicable. The Act is implemented through Commissioner for Workmen's Compensation.

- 4.14 The Payment of Gratuity Act, 1972 is applied to every factory and commercial establishment, shop, etc., with ten or more persons employed. The State of Maharashtra also made this Act applicable since 1972. All those employees having put in a continuous five years service or more or age of superannuation or resignation or death are entitled for gratuity payment. It is calculated at the rate of 15 days' pay per one year's service put in. According to the Act, the gratuity payment has to be effected within a month of retirement.
- 4.15 The Employees State Insurance Act 1948 is one of the progressive projects which the State undertook for providing social insurance. The Act is applicable to all factory workers including clerical staff. But the monthly income of the beneficiary should not exceed Rs. 1,000/-. The amendment of 1984 raises this limit to Rs. 1,600/- p.m., and also it has revised the rates of the employer's and employee's contribution. Under the provisions of the Act, the employers make twice as much the contribution which employees make. The Act provides important benefits which include sickness, maternity, disablement, dependents and medical benefits. Those getting advantage under the Workmen's Compensation Act are not eligible for benefit under this Act. The scheme is financed by the E.S.I. fund - created by the contributions from employers, employees and grants, donations, gifts from Central, State Governments

and local authorities and bodies. A panel of approved medical practitioners and hospitals are utilized to give benefits under this Act.

- 4.16 The Bombay Labour Welfare Fund Act 1953 was applicable to factories initially, but now shops and establishments with 10 or more employees also are covered under the provisions of this Act. The main object of this Act is to constitute a fund for financing the activities for promoting labour welfare. It seems to establish :
- (1) community and social education centres, reading rooms, libraries;
 - (ii) community necessities,
 - (iii) games and sports,
 - (iv) excursions, tours and holiday homes,
 - (v) entertainment and other forms of recreation,
 - (vi) home industries and other subsidiary occupations,
 - (vii) activities of social nature, etc.
- A contribution of 25 ps. has to be made by each employee from his pay of June and December every year, the employers and the State Government will make a matching contribution at the rate of 0.50 ps. each per employee. A Labour Welfare Board is constituted to go into the implementation of welfare measures.

- 4.17 Sales Tax : If a printer is giving only a printing service and paper is entirely supplied by the client, the sales tax need not be paid on the bill amount. But in this case, it is necessary that a printer should be in a position to produce the record as to when and how much

the paper was delivered by the client for printing. Such clients have to obtain a sales tax registration number if their purchases exceed Rs. 10,000/- annually. Those printers who print on their own paper and do the printing job and if their turnover exceeds Rs. 10,000/- annually and whose purchase of taxable articles exceeds Rs. 2,500/- annually have to pay sales tax. If the goods are sold out of state, a central sales tax has to be paid. The sales tax has to be paid to the sales tax office under the jurisdiction of Commissioner of Sales Tax.

A resume of all the central and state enactments boils down to one simple fact. All the printing presses which are covered by Factories Act (and several other Acts thereupon) belong to the organized sector. They are subject to strict regulations concerning the welfare of their workers, bonus, gratuity, etc. For smaller printing presses only two major laws are applicable, i.e., minimum wages act and shops and establishment act. Regular and detailed statistics are available for those printing presses classified as factories as per Factories' Act. In the case of smaller printing presses, collection of statistical information poses a problem to a researcher.

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CHAPTER 5

REVIEW OF THE PAST LITERATURE ON PRINTING INDUSTRY

5.1 Introduction

The nature of the printing industry has already been made clear in one of the previous chapters. It is a service industry in the sense that with the use of machinery the multiple copies of the text matter and illustrations are obtained. It, at the same time, involves a technique, by which efforts are constantly made to obtain better, speedier and cheaper production, per unit of input. This requires better management of printing firms, and subsequently of the printing industry, because this touches the vital issues which affect efficiency and productivity while production takes place.

Literature, available so far on printing industry, tries to deal with some of these aspects. The present chapter makes an attempt to review some of these studies in their proper perspective. The important features of those studies will be highlighted. It will be the endeavour to show how a particular study contributes in furtherance of the knowledge of printing industry from a certain viewpoint.

The review of the past literature will help us in

many ways. It will keep the present study on the right track, in the sense that some of the facts already established can be taken for granted while the hypothesis of the present study is developed. At the same time, reference to the literature already available will give us an opportunity to test some of our observations and findings. Comparison and contrasting of our observations will certainly be a step towards testing their objectivity. For instance, the economics of printing industry is being studied here in the context of Pune city. The growth and development of printing industry in the circumstances akin to Pune city will be worth a close study and the study will be rewarding.

The bird's eye view of the literature on this subject also throws light on the vast scope of the subject. The resume of the literature on the subject will be both indicative and selective.

5.2 Classification

At the outset, it is worthwhile classifying the literature in a suitable way. In the first part, a resume of the literature published outside India and depicting conditions from abroad will be attempted. And in the next place, the literature published in India will be surveyed.

Another way of classifying the available literature can also be presented. We have several books of technical nature, explaining printing as a technique, making use of machines and also making improvements with the use of computers or computer-aided designs. We have some writings emphasising management aspects of the act of printing. These writings emphasize the method by which labour is put to use, or time is not wasted when production is on, or how better material-management would enhance the output per unit of time. Basically these are the general management principles applied to printing industry, and thus they try to show what role these principles play in judging performance of printing industry.

Nextly we have a different bunch of writings on one or other aspects of printing industry. They can be sub-classified into books, surveys and monographs on printing industry. Books, in both English and Marathi languages, present the printing industry at the national or regional perspective, or they deal with some aspects suggesting some bearing on the economics of this industry. Then we have surveys undertaken by official or private agencies on printing industry as a whole or some aspects of the industry. Monographs and studies also take up some micro aspect of the industry and present some analytical or critical view of the printing industry.

5.3 Literature From Abroad

The survey of the literature begins with the literature published abroad or with the writings about printing industry and presses abroad.

The National Productivity Council (NPC), New Delhi, had sent a team of experts from the Printing Industry in India to visit Great Britain, United States and Japan. The study team was expected to visit printing establishments, inspect their working and submit report about the administration of printing units, operating conditions, situation of raw material, education and training of workers and employees, research and development in industry and also attempt a study of auxiliary servicing establishments.¹ The NPC Report is a comprehensive one and allows an opportunity to make comparisons between the printing industry in the developed countries and that from India. Obviously, the situations differ between the developed countries and India, still the study indicates further scope for the industry in India to improve productivity and quality of the printed product. The study also allows some comparisons between developed countries themselves. For instance, at one place, the study indicates the main difference between the American and British printing industry, stating thereby that more than half of the printing industry in U.S.A. is a non-union shop, i.e.,

open shop industry. Employment into printing industry in U.S.A. is not restricted while in Britain it is to a great extent a closed-shop affair.²

The study noted above also notes some peculiarities of printing industry. For instance, it defines printing as a 'multiple process and multiple product industry... a job may require a lot of composition and less of printing, or a job may require less of composition and a lot of printing, therefore, there are variations as far as the capacity, cost and efficiency measurements.³

Again, the NPC Report discusses various measures which the American printing industry has taken to improve labour productivity. The Report at one place discusses the Direct Incentive Scheme operated in British Printing units, wherein a basic output per hour is fixed; work exceeding the output level is calculated as the basis for incentive payment.⁴ The Report at the end enlists several recommendations intended for productivity improvement in the printing industry in India.⁵

Fred C. Munson has analysed at length the Labour Relations in the Lithographic Industry in the U.S.A.⁶ Munson starts with the trends in the growth of printing industry in U.S.A. in general and growth of lithographic industry in particular. He concludes that the lithographic branch of the printing industry is growing at a faster

rate than the letterpress printing industry. In U.S.A., a trend is being noticed recently. Paper mills are taking over the lithographic firms, a case of vertical integration. But at the same time, Lithographers are not integrating into publishing or advertising. Munson has noted some reasons behind this trend.⁷ Rapid process-innovations are taking place in U.S.A. and they are showing profound impact on the structure of the printing industry. Mr. Munson has discussed the impact of some of these innovations.⁸ For instance, he draws the conclusion that with more employment in the industry, the American Lithographers' Association has supported the technological changes within the industry.

Munson also elucidates, at length, the peculiar nature of printing industry; for instance, printed product is a unique one, and it cannot be resold, nor can it be stored.⁹ Like furniture or cloth, it has no shelf life. He also shows how the process decides the nature of market prevailing for the industry. A complicated process bringing out unique products tends to result in a monopoly type market. The author has presented the market mechanism and pricing process which the printing firms resort to. It has been asserted that product defining, for a printer, is a very difficult process. For a client of a printed product, punctuality, quality, service, neatness are

something which cannot be accounted for in terms of money. Munson has quoted as many as nine elements (such as quantity, paper stock, delivery date, etc.) on which, according to the printers, the price varies.¹⁰ At another place, he emphasizes that enforcement of uniform pricing agreements and costing practices would be a failure and quotes his experience in support of his assertion drawn from the American printing industry. The discussion naturally draws the conclusion that the printing industry is a typical example of intense non-price competitive industry. Winning each client for each job, by using any direct or indirect method, becomes imperative.

Her Majesty's Stationery Office (HMSO) also corroborates the conclusion drawn by Munson to a great extent.¹¹ The publication points out how the industry in U.K. and U.S.A. is poised for a structural change due to the facts that the industry is now facing competition from other modes of communication. The HMSO publication is also explicit in showing a genuine tendency for the specialization motives rather than firms wanting to undertake any type of printing job.¹² Objectives of printing firms while carrying on their business and pricing policies which they undertake also find their place in the book.¹³

We find another HMSO publication dealing with some more aspects of the printing industry, viz., wage costs

and prices in printing industry.¹⁴ It discusses the wage structure in British printing firms, and also has some discussion on the technological changes and productivity improvements in the industry.

John Child has taken a historical and analytical survey of industrial relations in the British printing industry.¹⁵ Child has largely followed the framework of analyzing industrial relations, developed by Professor John T. Dunlop in the monumental work Industrial Relations System published in 1958. To begin with, Child traces the history of the printing industry in U.K. from the fourteenth century to date. He describes the growth of the industry, how various occupations within the industry came to be stabilized, how printing technique got evolved and how and which acts were passed to regulate the industry. Mr. Child goes on to review the rise, growth and consolidation of the trade union activity within the industry. The history of the industrial relations analyses the effects of booms and depression on the printing industry. He mentions the impact of the industrial revolution of early nineteenth century on the printing industry - the use of iron press increased in the place of wooden ones.¹⁶ It is interesting to note that the earliest document containing the details of a systematic scale for payment for printing workers dates back to the year 1785.¹⁷ The author also

gives an account of the problems of unemployment in printing industry. He explains that the introduction of machinery was only a temporary cause of unemployment in the industry by 1820's; but competition among employers was a more fundamental cause of unemployment. He also states that the tramping system was, to a certain extent, a remedy over the problem of unemployment in the industry in mid-nineteenth century.¹⁸

In a separate chapter, Child elucidates the nature of the technical revolution which took place in the industry between 1890 and 1914.¹⁹ The revolution then was in the form of using mechanical composition methods using rotary printing processes, etc. He also states the economic effects of these changes in terms of growth of the industry, minute specialization and intensified competition. In another chapter, he discusses in great details, the origins and functioning of the Joint Industrial Councils. The J.I.C. were originally founded in July 1919, they were based on the recommendations of the Whitley Committee of 1918.²⁰ An experiment on similar lines was made in India about the Joint Management Councils.

A Report was prepared by the British Printing Industries Federation (formerly the British Federation of Master Printers) and was published in February 1979 under the title, The Economy and the Printing Industry. The Report

provides a means by which industrial printers can obtain information on the environment in which they have to work. At the outset, the current trends in the technological changes have been presented. The state of the economy in terms of rising prices, impact of oil wealth have all been given on the background. The implications of these changes in the economy, occurring in the printing industry have been the main part of the Report. For instance, due to changing technological scene, it has been well stated as to how the structural changes will take place within the industry, or how the industry would be necessitated to find new market for the printed product.²² The Report ends up with a cautious optimism that the move to contain costs and meet the challenges of the technological changes will only give this industry the vigour to survive the 1980's.²³

We have another author writing on Printing industry. F.A. Wells has taken up some variables which ultimately affect the output and performance of a printing firm.²⁴ We may highlight Wells' contribution by mentioning the concept of 'social productivity' which he introduced while he was analysing the implications of productivity improvements in a larger perspective. According to him, "the financial productivity is nothing but the difference between price and cost. Social productivity is an attempt to reduce costs and thus reduce selling price. The financial

productivity is not necessarily inconsistent with the social one."²⁵ Since economics is concerned less with mere monetary calculations and more concerned with gains and losses from the social point of view, the concept of social productivity introduced by Wells certainly deserves careful consideration.

Wells further goes on to discuss his own views on productivity improvements in printing industry. He points out a significant feature of this industry, i.e., according to him, this is the industry, where "the worker rather than the machine sets the pace, thus if a worker is induced to work faster by using machine or increasing skill, substantial advance in productivity may be secured, this would not involve substitution of capital for labour".²⁶ He goes on to remark that the British printing industry has accepted this particular view while practising their incentive system as against the American industries. The latter have substituted machines for labourers and have reaped substantial gains in productivity.

Later on in his book, he has discussed at great length how the incentive system was practised in a British printing firm. The system, as per his account was practised with great preparations, but due to certain obvious reasons, the system developed some internal inconsistencies and imbalances and thus was not successful.²⁷

5.4 Literature from India

Mr. Bapurao Naik, writing in Marathi, has handled the theme of book printing in India.²⁸ He has given an elaborative account of the stages of the history of book printing in the country. Along with the analysis of factors contributing to the golden age of book printing in Western India, he has laid special emphasis on the contribution which the type foundry activity has made to the book printing. He argues that the research and innovation in type founding activity have resulted in improving the output and quality of book production. But he concludes that the printing industry is drifting away from the book printing activity to the commercial printing.²⁹ To illustrate how accurate planning is required for printing of multivolume works like encyclopaedias, he has analysed the case of the printing of Encyclopaedia in Marathi (Ed. by Dr. Shridhar Vyankatesh Ketkar in 1930's).³⁰

At another place in his book, Mr. Naik elucidates conditions for successful book printing, especially need for new research in English and Devnagari scripts, new founts which would be standardized and also be elegant. He has commented extensively on the role of the Text Book Bureau in the State of Maharashtra. In the last part of the book, he has taken a survey of printing as an industry, and also touched upon some problems faced by the industry.

Many of the speeches and writings of the late Mr. Vishnupant Pandurang Bhagwat have been brought together in a book form. The book is in Marathi.³¹ Mr. Bhagwat regards printing activity as a cultural heritage and argues that respect of cultural values in society would only bring about higher quantity and quality of printed literature. He has regarded book printing and book publishing as complementary pursuits and he feels that books and similar literature would only prove as a means of providing literary pleasure and at the same time striking higher cultural standards.

Mr. V.S. Krishnamurty has written on both technical and economic aspects of printing industry.³² While analysing the nature of this industry, Mr. Krishnamurty looks at this industry as a part of graphic communications industry. His analysis is replete with the explanation of techniques which make use of computers in the act of printing.³³ He rightly says that printing has evolved from a simple craft-oriented trade into a highly sophisticated technology. In order to catch up, he argues for a need of a Central Institute of Graphic Communications Technology.³⁴

5.5 Survey Reports

A brief account of the surveys of Printing Industry can now be attempted. Chronologically speaking, the earliest references to this industry can be traced back to the Report

of the Royal Commission on Labour in India.³⁵ The Report makes a reference to security printing taking place in India in the British days and refers to the condition of workers in Government Printing Presses in India.³⁶

A little before Independence, the then Government appointed a separate committee on Labour Investigation, under the chairmanship of Mr. D.V. Rege.³⁷ One of the important findings of the investigation is that enforcement of the labour laws has not been upto the mark... The workers in India have not been able to obtain a fair deal.³⁸ The Report further elaborates the general working conditions in the sampled printing presses in India. It states that press premises are mostly ill-ventilated dark rooms, walls and ceilings are seldom white washed... regular periodical medical examination of workers is not held, so that data on lead poisoning was not available.³⁹ The Report makes a detailed reference to the occurrence of lead poisoning and eye diseases to workers from printing presses.

The UNESCO carried out a survey on printing facilities in India, Pakistan, Burmah and Ceylon to judge whether the facilities were sufficient in eradicating illiteracy from countries in South East Asia. That was perhaps the earliest Report on Printing Industry after independence.⁴⁰ The author of the Report makes a strong recommendation of developing this industry; and expects the government take

effective steps to achieve this goal. The Report also puts on record a note of caution about a tendency obstructing the development of the industry and that was the competition which private presses face from the Government presses or the Government subsidized presses.⁴¹ On the move to nationalize the text book printing and publishing activity, the Report expresses its concern over this tendency of monopolization and predicts that this would have disastrous repercussions on the growth and development of the industry.⁴²

Industrial Relations in the Printing Industry in a metropolitan area were studied by Thakur and Munson.⁴³ The author's study the industrial relations in the Delhi printing industry. They elucidate the structure of the printing industry in Delhi, followed by unionism in Delhi. The Report concludes that labour laws are hardly respected, they are largely violated. The printing union, the Report observes has low bargaining power. The Report emphasizes the need for skill formation within the industry.

After independence, the Labour Bureau of the Government of India surveyed the labour conditions in printing presses in India.⁴⁴ The Report opens with a statewise statistics of the number of printing presses and average daily employment in India. It records here that the State of Maharashtra has 17.56 per cent of the total printing presses in India in

the factory sector and it has 26.89 per cent of the total employment in them in India. A sample of 86 presses was taken up in Maharashtra, and the Report records that about 84.7 per cent of the total workers are engaged in production and related activities the industry. About 98 per cent workers are time rated in Maharashtra. The Report also makes a reference to the incentive system being practised in the industry.⁴⁵

As stated earlier in one of the previous chapters, in the State of Maharashtra the printing industry came under the purview of the minimum wages in 1955. Along with the 1976 Committee Report of the State Government, nature and conditions of the printing industry have been summarized.⁴⁶ The Committee puts up a strong case for implementing minimum wages in printing industry in the State. The industrial disputes act is applicable to printing presses in the factory sector. The smaller presses in the industry needed separate consideration as far as their workers were concerned. The government realised this need and passed the Minimum Wages Act for this industry. The Report had recommended minimum outturn for working of eight hours a day. The same minimum wages were revised by the Government as per the Government Gazette of 16th May 1983; but this new notification did not contain any report or survey of the printing industry.

The National Council of Applied Economic Research (NCAER) undertook a comprehensive survey of the Indian Book Industry, and published a two volume report of the same.⁴⁷ In both the volumes, the Report takes a panoramic survey of the printing industry in the country. In the first part, the Report reproduces findings of a survey of the industry undertaken by Indian Printing and Graphic Art Academy in 1973. For instance, the Report propounds its observation that very low capacity of the industry is devoted for book printing.⁴⁸ In order to utilize the capacity in the composing department, the book printing jobs are undertaken.

The Ministry of Industrial Development, Government of India took initiative to constitute a Development Panel for Printing Industry. The Operations Research Group, Baroda was given the task of studying, in depth, this industry and submit a Report thereof. An all-India level survey was taken by ORG in 1977 and it was published in 1980.⁴⁹ Data was collected from over 2500 printing presses from all over country. The Report traces the growth of printing industry in India, presents the structure of the industry with all the necessary details. The Report ends up with a brief analysis of the future plans of this industry.

The survey of literature on printing shall be incomplete if a reference is not made to the Directory of

Printers from the State of Maharashtra, compiled by the Maharashtra Mudran Parishad.⁵⁰ In 1980, it was the third time that the survey was completed and the Report was published. The Report not only contains the listing of all the printing presses from the State but also several articles on management of printing presses, tips on administration of a press, and a write up on the training facilities of printing available in the state.

The Report of the Second Press Commission analyses the printing press industry from the newspaper point of view.⁵¹ It contains a report of a Fact Finding Sub-Committee on newspaper economics; analyses the possible effects of introduction of new techniques in composing and printing. It also presents a profile of Indian press by 2001 A.D.

Chronologically speaking, we have a recent report on printing industry, i.e., the third occupational wage survey pertaining to this industry.⁵² The Report notes that the industry contains about 3086 establishments in the organized sector employing about 2 lakh workers.

In addition to several reports on surveys and study teams, we have a few studies undertaken on some aspects of the printing industry. In this context, the first to be cited is the Report of a survey undertaken between 1954 and 1956.⁵³ The survey took into account only the small firms

in Bombay, including printing establishments, which are not covered by the Factories Act 1948. For printing presses, the survey recorded that in Bombay about 70 per cent of the total printing establishments were small firms, i.e., using less than 10 workers and power or using less than 20 workers without using power. The survey analyses the capital structure, pattern of ownership of presses, except of capacity utilization in the printing firms. As per the Report, about 91 per cent of the labourers working in presses sampled out were on time wages against about 9 per cent working as contract labourers. Wages and salaries account for about 28 per cent of the total cost. This documents ends up with the observation that the small firms, though beset with several problems of low capacity utilization and narrow capital base, a more serious problem is that of cut throat competition in the market due to excessively large number of printing firms operating in the city. It is only the improvement in productivity, which would reduce price to a certain extent, and enhance demand, subsequently to improve capacity utilization. In this sense, the solution to the problems of small industry lie in the general improvement in the state of the economy.⁵⁴

We have another study carried out in another metropolis in the country, i.e., Delhi. Mr. L.L. Lamba studied the social background of printing press workers in Delhi.⁵⁵ The study explains the aspects of skill formation, labour

mobility, within the industry.

5.6 Other Studies

Pattern and Dean have attempted to measure empirically economies in large scale production and have presented problems associated with this. They have analysed a case study of economies in book printing.⁵⁶ The study concludes that most of the economies in this type of printing are associated with larger print number, by which composition costs and make-ready costs get spread over a larger number of output. It further states that maximum number of economies can only be obtained when all five types of economies are available at the same time.

M. Seethamma has studied the Economics of Printing Industry in Madras.⁵⁷ The study analyses the structure of printing industry in some states including Maharashtra, West Bengal and Tamilnadu (erstwhile Madras State). The pattern of demand for printed product, the cost structure of the industry, capacity utilisation of the industry have all been studied in this survey. The study confirms the conclusion that lack of standardization and specialization prevent the industry from making full utilization of the available capacity. This industry has both organized and unorganized sectors operating simultaneously. Since these two differ fundamentally, Seethamma suggests that two separate costing systems be evolved for two separate

sectors. The author also has emphasized the importance of inplant training within the industry.

Mr. S.A. Sapre has also analysed the cost structure of the printing industry.⁵⁸ He has identified several variables on which the unit cost rates in printing industry depend. Some of them are : the size of the firm, the quality of the work turned out and the type of the service provided.

As noted at the beginning of this narrative account of the literature available on various aspects of printing industry, the third type of material available deals with the technical aspects of the art of printing. The present study is certainly not the technical one, it will merely indicate only illustrative references. Mr. Saifuddin's exposition of the printing industry deals from both technological and management points of view. His treatise is a handbook of how better production management in a press can be organized.⁵⁹

This survey will be concluded with the reference to two recent books on printing technology. Krishnamurty's book is a rapid survey of the recent advances in the printing technique.⁶⁰ A still more recent account of the rapid technological changes taking place in the printing technique is Anthony Smith's book on the electronic and computer revolution taking place in the printing industry.

Especially, the social and economic effects of the recent changes have been placed in the predictive and analytical tone.⁶¹

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CHAPTER 6

RESEARCH DESIGN AND METHODOLOGY

6.1 Introduction

The previous chapter has briefly outlined the literature, available so far on printing industry. It has been shown as to how a comprehensive economic analysis of this industry has still not been attempted. The quantum of available literature is of somewhat heterogenous nature; it is mainly technical in nature. Again to a certain extent, historical surveys have been attempted. A few case studies have taken place. Efforts to take a look at the available literature have provided the necessary perspective for the study which is undertaken here. It would be of our help in formulating the hypothesis through the present study. Even though critical evaluation of all the literature was not the objective of the last chapter, certainly the knowledge of the track covered so far is an important input for the onward journey. Thus an insight into the field where the present study is going to lead to will be interesting, instructive, stimulating and rewarding.

6.2 Objectives

The present study shall take a step further for an intensive study of printing industry. The nature of the

study being attempted has also already been made clear. To begin with, one of the objectives of this study is to state facts about this industry in the city of Pune. In this descriptive aspect, the nature of the industry, capital structure, growth, nature of market, labour conditions, etc., will be presented. In order to study the economics of this industry, the characteristics of the printing industry will prove to be a foundation for further analysis. For instance, the study of the process of decision making in the printing firms, or objectives of the printing firms, or the degree of specialization, will all primarily depend upon the thorough knowledge of the nature of the industry. Thus the descriptive aspect is a precondition for formulation of hypothesis about the behaviour of this industry.

But, also, it has to be made clear that the study seeks to go a lot further. Once familiarity is gained with the printing industry as such, the study will proceed to go into some correlations within the industry. It will try to explain certain phenomena occurring in this industry. Causes of certain phenomena and also responses on certain phenomena will be analysed here. Thus, partly the present study shall also be exploratory in nature. To describe the aspects of the industry shall be a type of static analysis, but to go into the intricacies of the dynamics of changes in the industry will be rewarding. For instance, how do firms within the industry react to the changing technology ?

Answers to these inquiries will be sought through this study.

In addition to these two approaches, the study is also partly of a diagnostic nature. Since the study aims at going into the economics of this industry, it aims to collect precise statistical information of the printing firms in this city. Aggregate capital invested, total wages and salaries paid and total turnover obtained are some of the points on which information in the statistical form will be collected. Care will be taken to strike accuracy and at the same time objectivity and unbiased analysis. And with this, the study aims to bring out the hypothesis about the performance and behaviour of this industry. This will enable a kind of generalization to be made about similar industries. If possible, the study will come out with some observations of predictive nature. Thus, to conclude, the research design will be partly a descriptive study, partly an exploratory study and partly a diagnostic study.

6.3 Research Universe

An intensive study of the printing units in the city of Pune necessitated an indepth probe into the operations of them. This will only enable us to draw generalizations from the observations made and thus formulate hypotheses about the performance of this industry. The complete coverage of all the presses in Pune is not possible. Any suitable

method of sampling has to be employed to represent the 'population' or 'universe' to be surveyed. Several advantages are claimed of this type of probability sampling. A sample survey saves a lot of time, energy and money as against the survey of the entire universe. A higher level of accuracy can be maintained when a sample of the universe is enquired into. But the sample also has some important preconditions. Maximum care has to be taken to see that the sample drawn from the universe to be surveyed is a true representative one and it is free from any type of bias. Only this kind of sample would lead to a more accurate judgement about the research undertaken, about the characteristics of the universe. The present survey had to keep these preconditions of sampling before eyes and then only to proceed to collect data and statistical information of the printing firms in this city. Obviously before sampling is put into practice, to fix up accurately the size and nature of the universe to be studied at large is an important step. Once the total number of printing presses is enumerated, probability sampling out of them could logically be attempted. Thus the important question: How many printing presses are there in Pune City? in Pune Camp area? etc.

Since there was no single reliable and official source of this information, several sources were tapped, compared, cross-referred, cross-checked and thus an approximation of the universe was arrived at. Important stages of this journey

towards the final estimate of the universe need a brief mention.

As already referred to in one of the previous chapters, the Maharashtra Mudran Parishad, the state level federation of the printing press associations from all over the state, has been publishing a tally of all the printers from the State. The first one was published in 1961 followed by the second in 1968 and the latest one was published in 1980. This Directory contains names and addresses of the printing presses, year of establishment, number of employees, nature of business undertaken, etc. The editors of the Directory sent out questionnaires through reply paid mail to printing presses, toured the entire state of Maharashtra through representatives and compiled the list of printers of Maharashtra. The editor himself admits¹ that the Directory might not have covered all the printing presses from the state. While classifying the main activity, some entries have not given any specifications about the number of employees or about the machinery in use; some presses are the self presses, i.e., they work only for their own institution (captive plants, in the technical jargon) like the government presses or publishers' presses or those units where printing is just one part of the total production process; some are the printing units for educational purposes. The total tally of presses, for our purpose, also has eliminated

the newspapers presses from our total. When printing presses working on commercial basis were only taken into account, according to the Directory, there were 303 printing presses in Pune City by 1980. The Directory also classifies presses from Pimpri-Chinchwad area as belonging to Pune. These entries have been eliminated and a total of 303 is arrived at. This total would be used for cross checking purposes at a later stage.

Another secondary source for the estimate of the total number of printing presses in Pune City is the Industrial Directory published by the Industries Department, Government of Maharashtra. The one for Pune Division was published in 1981.² It contains the listing of the printing presses of all the types, i.e., large industrial houses as well as small industrial units. But the Directory does not specify the methodology followed while collecting the data of the total number of presses. And, again, the registration under the 'small scale industries' is voluntary and thus the total as given by the Industrial Directory keeps a wider margin of underestimation. Keeping out the printing units falling out of geographical coverage of the present study, in 1977, the Pune City had 180 printing presses and during 1978 and 1979, 25 presses were added therein. Thus by the beginning of 1980 as per this source, there were 205 printing presses in Pune City.

Another attempt of compiling the Directory of Printing Presses is done by the Mahratta Chamber of Commerce and Industries in Pune. For product of the printing industry, the Industrial and Commercial Directory published by the Chamber in 1978,³ uses different categories such as : art printing, block printing, commercial printing, litho printing, offset printing, screen printing, job printing, etc. This edition has enlisted as many as 238 printing establishments. The Chamber, at the time of the new edition of the Directory makes an appeal through newspapers for submitting information of various production units in Pune. It also sends field investigators to contact as many production units from the City and collect information from them. For the purpose of the present study, the tally of 238 printing presses is an underestimation to a certain extent because of non-coverage of certain units, it might be an over coverage to a certain extent because it contains units from Poona Cantonment and Pimpri-Chinchwad area too, which, as has already been made clear is not the part of the present study. The total also includes the newspaper units which are to be kept out from our total.

The 1985 edition of the same Directory has enlisted 345 printing units in Pune City. While the new edition certainly marks an impressive growth of printing units in Pune, it has changed the mode of classification of printing activity. The former classification was more specific and

a narrow one; but the 1985 survey accepted only a broad classification of commercial printing, suggesting over-coverage and overestimation to a certain extent due to want of accurate and precise classification. Since the data collection for the present survey was completed well before the publication of the 1985 edition of the Directory, this statistical information does not form the basis of estimation of the research universe for the present study.

As mentioned earlier, the city has an employers' association of this industry, viz., Poona Press Owners' Association established in 1919. The list of members of this Association was another source to obtain a near-precise estimate of the total number of printing presses in Pune. When approached, the office bearers of the Association readily provided the necessary information about the members of the Association. As on 1st September 1984, the Association had 249 members. But the list showed that multiple membership was allowed for the same firm, i.e., the firm and also the proprietor/partner, etc., would be members with different membership numbers. The constitution of the Association allowed binders, publishers, rulers, printers' suppliers, type founders, block makers and individuals from the trade to be the valid members. The Association did not keep any geographical limit for being eligible for membership and thus a process of elimination and to be resorted

to for arriving at the estimate of actual printer members of the Association. Thus the number boiled down to 143 as valid commercial printers to be the members of the Association. Discussions with the members of the Managing Committee and also the President of the Association revealed that the amendment to the Constitution of the Association had been sought to increase the maximum membership from 250 to 400. This would allow many more to become members of the Association. It was also admitted that the Association on its own did not make any solid efforts to increase the membership.

Along with the Poona Press Owners' Association, Pune has another printers' body, viz., Poona Lithographers Association, which had 25 members as in September 1984. This Association mostly had offset printers and Lithographers as its members including one xerox-copier too. This Association has not kept any geographical limit and thus members hail from the City of Pune as also from suburbs of the city. Some printing establishments were members of both the Associations. So much about the secondary sources for estimation of the universe for the survey of Printing industry in Pune.

The sources from the governmental agencies at all levels also provided for the total of the printing presses from Pune. The District Statistical Abstract for 1981-82

was available in 1984.⁴ According to the same the Pune district had the total of 524 printing presses and the Pune city Tehsil had 423 printing presses as on 31st of March 1982. The Pune City tehsil included the Pune Cantonment area too. Discussions with the District Statistical Officer revealed that the data for the District Statistical Abstract was not collected by the office because their office does not have machinery for this type of data collection nor even for updating the available statistical data. The District Statistical Office depends on the Home Branch of the Collector office of the City to provide for the printing presses who approach them with the declaration document required under the appropriate act. But the Home Branch in itself does not keep any list of printing presses who have obtained this type of declaration within their jurisdiction. The Home Branch does not have any inspectorate to visit printing presses in the city and to check the declaration made by each and every press in operation. This was revealed during the visit to the Collector Office. Thus in effect, the tally of the printing presses obtained through the District Statistical Office also suffers from under-estimation to a certain extent. For an individual printer the declaration at the Collector Office in practice is more of a voluntary nature than compulsory. Thus the universe of 423 printing presses (of Pune City and Cantonment area) was an approximation of the estimation of the total number of printing establishments.

The office of the Deputy Chief Inspector of Factories,

Pune readily made available the list of factories covered under the Factories Act 1948. As defined earlier, only those presses employing ten or more workers while using power or employing twenty or more workers without using power were covered by the Factories Act. The City of Pune has 42 printing presses wherein the Factories Act was applicable. This total included the Poona Cantonment jurisdiction and also the government presses, self presses, educational presses, etc.

Last but the most important source of information about the estimate was the Municipal Corporation of Pune. Till 1984, the Bombay Shops and Establishment Act was implemented through the Municipal Corporation. After that it has been implemented by the State Government. The licensing department of the Corporation has a list of all the establishments, shops, etc., including those covered under the Factories Act. Every business establishment within the Corporation limit has to obtain a licence before the business is set on. The Corporation authorities came out with all help for finalising a precise estimate of printing presses in Pune City.

Some facts are to be mentioned about the record of these establishments kept by the Corporation authorities. The record is kept with the Corporation wardwise. It is not kept industrywise nor businesswise. Therefore, all the

licence registers of all the wards within the Pune City had to be scrutinized to make a list of the printing press in the city. It was discovered, while taking a tally of the presses that the Corporation does not insist on the title or the name of the firm carrying on a particular business. The only expectation is name of the 'employer'. Dozens of firms, while filling this information in the licence form give the name of the proprietor/partner/manager and thus the name of the firm is not available. The name of the firm many times suggests the type of business also, but name of the individual does not state anything about the type of business. There are hundreds of entries in the Corporation record which remain vague as far as the title of the business firm is concerned.

The Corporation is also not very particular as to what type of business was carried out on a particular premise. For the activity of printing press, various nomenclatures were utilized by the licencees and the Corporation authorities never insist on accurate, standardized and true mention/registration of their business. Since Poona Press Owners' Association list of members was at hand, cross checking of the Corporation record became possible. This initially revealed that some members, actively engaged in the printing business did not have their entry into the municipal corporation records. This was despite the fact that the shop act

machinery included inspectors to implement the act by actual visit to the business premises. The nomenclature used by the corporation authorities such as Press in effect meant a power press, a filter press or a charak press, or a press machine etc., suggesting the hosiery or laundry or baling activity. Press did not necessarily suggest a printing press and thus the corporation record which is the most valuable primary source of this vital information is defective to a certain extent.

Besides, it was also revealed that the term job work also suggested printing activity in some cases because the licence holder thereby means the commercial jobs undertaken. This meant that some percentage of printing presses was included under the category 'job work' and thus suggests some degree of deviation from the true number of presses in Pune. Again, the 'nature of business' column went blank in some cases in the Corporation records and thus due to this lapse also, some printing presses might have gone unnoticed. Due to all those situations noted here, some degree of understatement of the number of printing presses might have taken place.

Another situation also suggests some overestimation in the number of printing presses recorded at the corporation office. In the wardwise records of the location of presses, several cases were noticed of more than one licences at the

same premises in the name of different members from the same family. Discussions with the Superintendent of the licensing department conveyed the possibilities that annexations to the area of business premises is to be communicated to the corporation authorities. The licencees find it easier to get a new Shop Act licence sanctioned than annexation to the existing premises, the Shop Act imposing many restrictions on this expansions. Secondly, a bank loan is sanctioned for a machine or any other business purpose only if the shop act licence is held by the borrower. Therefore, in many cases, a fresh licence is obtained for the sake of bank loan purpose, which actually is the same business operation at the same premises. This inflates the number of printing presses at the Corporation office records.

Even though many firms start up their activity but are not quite particular about obtaining shop act licence immediately on commencement the extent of the same in printing activity is rather alarming. The opening up of a composing department only does not entail large space, even a space of about 100 sq.ft. is sufficient for undertaking composing work, it does not require any machine nor power connection, does not need any rigid conditions of frontage or ground floor and thus numerous composing activity firms are operating in the city, and unusually large number of them is believed to be functioning without even a formal shop act license. This again leads to understatement of the

licence record at the Corporation office.

It has already been indicated that the business units which close down their business do not necessarily inform the Corporation authorities immediately, leading to the inflation of the number of printing presses.

The upshot of all the discussion upto now is that there is reason to show both understatement of the total number of printing presses and also overstatement of presses in the Corporation record. The total which was enumerated at the Corporation licensing office was 417 printing presses as on 1st October 1984 in the city of Pune. The possibilities of additions and deductions (due to various reasons elucidated above) were discussed with the Corporation authorities along with the extent of these additions and deductions. These adjustments necessitated addition of about 4 per cent and deduction of about 6 per cent from the total of 417 noted above, suggesting a net deduction of 2 per cent from 417, keeping the nett of 409 printing presses.

As suggested earlier, the captive plants such as the government presses or institutional presses have been kept out of this inquiry. They solely cater for government jobs, do not face any competition in the open market, directly or indirectly with other printing presses in the city, besides they are not in a position to provide as much a detailed statistical information as required in the present survey

because their product is not sold in the market. It can be regarded as a non-comparable unit from the universe.

Similar is the case with newspapers. The nature of market which a commercial printer faces is different from that a newspaper faces. Along with the sale of newspaper, advertisement is an important source of income for newspapers. A commercial printer does not have this source of income. Some newspapers take up commercial job printing but some do not, and thus the newspapers cannot be compared at par with the rest of the commercial printers. They also have been omitted from the universe of the survey currently undertaken. Thus in total 14 printing presses falling in the category of self presses, newspapers and government presses have been deducted from the earlier tally of 409 presses and thus bringing the total to 395 presses.

It has been noted earlier that the tally of the universe of the survey of printing industry was attempted in the 1st week of October 1984. As per the Corporation records, during the year 1982-83, 1983-84 and April-September 1984 in total 28 new printing presses were established. Since only those establishments which have completed at least two years of their business operations would only be in a position to give detailed statistical information required by the present survey, the effective universe meant for the present purpose is only of 367 printing presses from the Pune City.

6.4 Sampling

Putting together the list of all these 367 printing presses from the city of Pune, a sample of 15 per cent of the total universe was drawn, i.e., 55 printing establishments. To chalk out the required sample of 55 establishments only random sample method was followed since the stratified sampling method could not be used for want of precise data. For example, the strata of letterpress printers and offset printers separately would have represented the universe more meaningfully but the Corporation record does not specify the nature of their operations to this degree of specialization. Even the Press Owners' Association membership list, which was used for ready cross-references did not specify the nature of operations. Thus, the simple random method of taking out about 15 per cent of the universe was resorted to. It is believed that this sample would make this statistical inquiry representative and unbiased. The President of the Association was contacted and a request was made to him for his assistance in this project, which he readily did. All these printing establishments were approached in person, and the proprietors/managers were requested to extend their cooperation, which they, on their own part, did most willingly. The survey was completed during the months of October, November, December 1984. In the last round of data collection, despite great efforts in persuading and getting the questionnaire

filled from all the respondents, one of the sampled respondent did not respond for some reason or the other and the other could not give all the necessary data as required of the questionnaire, and thus the total number of respondents whose data and questionnaires were ultimately used for further processing came down to 53.

6.5 Survey Method

For data collection, mainly the questionnaire method was followed. But the questionnaire - schedules to put into the precise definition - were not mailed to any one. Each and every firm from the sample was approached personally, a written appeal as well as oral request was made to the proprietor/manager and during a session as per mutual convenience, the questions were put to the interviewer and responses, replies were recorded as they were given by the person concerned. Due to personal visit and discussion a rapport could be established with the respondent and clarifications were offered to him, if and when required in the case of any query. Questions of all types were included in the schedule. The first part sought to collect information about the nature of business carried out by the firm, the forms of business organisation, year of establishment, etc. This was followed by the data about the use of raw material. Next, some information about the capital structure, followed by the data about workers and employees. Some questions

dealt with the nature of production undertaken. The type of marketing procedure followed and the nature and degree of competition faced was also probed into. The last section of the schedule dealt with specific problems faced by the industry.

The schedule contained questions mainly of four types:

- (a) Supply-type : The respondents were expected to supply information on the points suggested therein.
- (b) Pre-coded questions : Here the alternatives were provided to the respondents and they were supposed to tick their choice of alternatives.
- (c) Ranking type : Out of the given alternatives, the respondents were expected to give their ranking as per their priority.
- (d) Open-end questions : Where the respondents were to record their opinion, views, impressions on certain issues, This can be termed as the inquiry of the exploratory nature.

The schedule was framed in Marathi. Initial version of the schedule was tried at about 5 respondents from the sample. This pretesting gave an opportunity to allow some changes, omissions and additions to the schedule to eliminate some ambiguities and repetitions.

Filling up of schedules was supplemented by interviews of the same respondents. This verbal method of collecting

data was used to give still more scope to the respondents to express their views on the related matters. It was realized that sometimes, responding to the schedule kept some points untouched according to the respondents and therefore that offered an opportunity to fill those gaps in communication. In fact that was a flexible way of conveying their views. Some press owners who were educated hardly upto primary school level, could not follow the intricacies of a detailed inquiry in the question-answer form and thus a some latitude was offered to them for recording their views.

To a certain extent, the observation method also supplemented the schedule-and-interview method. According to the Oxford Directory observation is "accurate watching and noting of phenomena as they occur in nature with regard to cause and effect or mutual relations". This definition shows the scope of the act of observation, which is perception with a purpose. "The participant observer shares in the life and activities of the community, observing - in the strict sense - what is going on around him but supplementing this conversations, interviews and studies of records."⁵ Thus instead of any interpreter or reporter, here in this method the information is picked up directly without any intermediary. Occasionally this method offers an opportunity to cross-check what was reported through the schedule and also through the interview. As soon as the session of schedule and interview was over, every time, some impressions after

observations were recorded.

Even though the schedule-interview-observation method covered most of the aspects of the respondent's views, still in some cases some peculiarities needed a special mention. In some cases, a total understanding of all the aspects required an integrated perspective. Those respondents were intensively studied under case study method.

As noted in an earlier chapter, the data collection at the primary level was supplemented, wherever necessary, by the documentary sources like the monthly journal of the Press Owners' Association, Mudran Prakash, Young Printer, Printing Times, Print Bulletin, etc. This source was useful in gaining general perspective of the situation prevailing currently in printing industry.

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CHAPTER 7

ANALYSIS OF DIFFERENT ASPECTS OF PRINTING INDUSTRY

I

In Chapter 6 the research design, research methodology and the sampling methods have been elaborated adequately. It is sufficient to repeat here that a valid sample of 53 printing presses in Pune City was selected for an intensive inquiry into their operations, activities and all the related matters. This chapter will present, in a phased manner, the findings of the survey attempted thereof.

The response from the printing press proprietors/managers was encouraging. The schedules were filled up at the time of the interview with the respondent and immediately after the session with the respondent, the calculations of the statistical information provided were completed and editing of the schedule alongwith its scrutiny was completed. Some relevant observations/impressions about the respondent, his responses, etc., were also recorded in the schedules.

The findings initially recorded the general information about the nature of the responding printing presses from the sample. The type of their business organization, the age of each printing firm, the type of business undertaken has a lot to do with the nature and volume of their operations.

This elucidation will be followed by that of the workers from the printing presses from the City. This in turn will be followed by the discussion on the business practices, financing, price fixation, marketing and similar factors. The observations recorded are obviously based on the responses which the responding printing firms have revealed through the discussions and their answers noted in the questionnaire. The statistical information and subsequent generalizations about the volume of business, the profitability of a firm, the volume and components of capital have been compiled from the responses given by the firms.

GENERAL ASPECTS

7.1 Locational Pattern

It has been already noted that the survey undertaken has used a confirmed sample of 53 printing presses from Pune City area. The methodology of drawing out sample has been explained in Chapter VI. The total of 53 printing presses had been spread over various parts of Pune City. The Table 7.1 shows the distribution of all the 53 printing presses over the span of the city. As the Table shows, 31 printing presses out of 53 draw from the main Pune City. This shows a sizeable percentage of about 58.49 claimed by the city area. As has been made clear in a footnote to the Table, that the Pune City area is the traditional city area,

i.e., the Narayan Peth, Kasba Peth, Shukrawar, Sadashiv, Budhwar, etc., wards. The remaining 22 printing presses from the sample have been located in 9 wards, such as Yeravada, Erandawane, Hadapsar, Shivajinagar, etc. These 22 printing presses form about 41.51 per cent of the total sample under

Table 7.1 : Locational Pattern of the Responding Printing Units

Peth/Ward/Area	No. of printing presses from the sample
1. Poona City area*	31 (58.49)**
2. Yeravada	03 (5.66)
3. Erandawane	04 (7.55)
4. Hadapsar	04 (7.55)
5. Shivajinagar	02 (3.77)
6. Parvati	02 (3.77)
7. Satara Road	04 (7.55)
8. Gultekdi	02 (3.77)
9. Bopodi	01 (1.89)
Total :	53 (100.00)

* The Poona city area includes the wards (Peths) like Narayan, Kasba, Shukrawar, Sadashiv, Shanwar, Nana Bhawani, Somwar, Rasta and Budhwar.

** Figures into brackets refer to percentages to the totals.

investigation. The Table 7.1 also shows percentagewise break-up of the printing presses from these wards. Erandawane area has 7.54 per cent presses from the sample; the Satara Road and Hadapsar areas also have the same percentage of printing presses from the sample. Gultekadi, Shivajinagar and Parvati areas have equal percentage, i.e., 3.77 per cent each from the sample.

Two observations can be noted here. The first one is that the sample shows a fairly widespread and balanced coverage of the geographical area of the city. The areas such as Gultekadi and Satara Road have been the expanding settlements more prominently in the last twenty five years or so, as compared to the core of the city, which has a long history of settlements. Areawise and populationwise distribution of all the wards noted above is not presented here. But it can be said that Pune City area, noted in the Table 7.1 above has a more dense population and a larger size of population than the other wards and thus the higher percentage (58.49%) of printing presses from Pune City area is quite justifiable.

7.2 Business Organization

The sample of printing presses under investigation reveals their varied types of business organizations. As the Table 7.2 reveals, the majority out of the sampled printing presses, i.e., 26 out of 53 (i.e., 49.06% of the

Table 7.2 : Type of Business organization of the Printing Presses

Type of the Business Organization	No. of printing presses from the sample	
Proprietorship	26	(49.06)
Family Partnership	8	(15.09)
Partnership	10	(18.87)
Cooperative Society	4	(7.55)
Private Limited Company	3	(5.66)
Public Limited Company	-	
Public Trust	2	(3.77)
Total :	53	(100.00)

total) are the single proprietary firms. This category is followed by Family Partnership firms, 8 out of 53 (i.e., 15.09 per cent of the total) and partnership firms, 10 out of 53 (i.e., 18.87 per cent of the total). These three categories together claim the total of 44 printing firms from the total of 53, i.e., about 83.02 per cent of the total. These three categories can be described as the informal or traditional business organization wherein the liability of the proprietor or the partner is unlimited. Thus out of the total of the sampled 53 printing presses, 83.02 per cent show an informal process of incorporation, making the proprietors and partners bear the unlimited liability in business.

The second category has three types of business organizations observed from the survey. We observe 4 printing presses (i.e., 7.55 per cent of the total) that are cooperative societies. The type of private limited company claims 3 presses from the total (i.e., 5.66 per cent of the total). And 2 presses (i.e., 3.77 per cent of the total) are the public trusts. This second category of formal corporate existence has a total 9 printing presses, i.e. 16.98 per cent of the total number. They are characterised by limited liability with a little more complicated and rigid business administration.

The correlation between type of business organization and size of the printing firm can well be established. For this analysis, certain criteria can be selected to call the printing firm a big one or a medium one or a small one. The number of total workers employed, the size of total productive capital employed or the total annual turnover reached can serve the purpose of showing this correlation, but that interconnection will be shown at a later stage.

7.3 Age

The Table 7.3 portrays the classification of printing presses from the sample on the basis of their year of establishment. The year of establishment reveals the age of the printing press. From the view point of the analysis attempted here, the age of any firm shows its bearing on two major

qualifications as far as the firm is concerned. The age shows the experience it has accumulated throughout the period of its existence. The type of business pursued, the quality of management practices followed, the problems of 'ageing' of a firm can all be checked by the age of the firm. The age can also tell about the life of the fixed assets, say plant and machinery and thus the book value of the assets depends on the period over which the plant or machinery have been in use. The responsiveness of a firm also depends upon the firm's age, the younger firms showing comparatively greater flexibility than the older ones. Some of these observations shall be tested from the sample and surveyed for the present purpose. The Table 7.3 gives this basic information. It had already been made clear that the data collection was carried out in the second half of 1984 and

Table 7.3 : Classification by the year of Establishment

	<u>No. of Printing Presses</u>	
Before 1950	07	(13.21)
1950-1960	04	(7.55)
1961-1970	15	(28.30)
1971-1980	24	(45.28)
After 1980	03	(5.66)
Total :	53	(100.00)

the data presented in the Table shows that 7 printing presses from the sample (13.21 per cent from the sample) were established before 1950 and thus were more than thirty years old. The majority lot from the sample is that of 24 printing presses, (45.28 per cent of the total) which was established during the decade of 1971-80. Only 3 firms from the sample (i.e., 5.66 per cent of the total) were very 'young', i.e., established after 1980. The discussion of the methodology has already made clear why the firms of very recent origin have been either excluded from the sample or have been allotted low weightage in the sample.

7.4 Mode of Acquisition

The Table 7.4 states the method of acquisition of the present business by the owner of the printing press. Reference may be made to Table 7.2 where it has been shown that 9 printing presses from the sample have come into existence by the process of formal incorporation. They

Table 7.4 : Classification According to the Mode of Acquisition of Present Business

		<u>No. of Printing Presses</u>	
1.	Started by the owner	31	(58.49)
2.	Inherited	05	(9.43)
3.	Purchased	05	(9.43)
4.	Leased in by the present owner	03	(5.66)
5.	Any other mode	09	(16.99)
Total :		53	(100.00)

include the categories like private limited company, cooperative society and a public trust. In the Table 7.4 these presses have been classified under the category of "Any other mode". The rest of the modes of starting up of business have been categorized in the Table 7.4. The very common method revealed by the responses from the printing presses sampled is that of the "owner starting up his own press". Thirty one printing presses (i.e., 58.49 per cent of the total) have come into existence by the initiative of the owners. The total of 13 printing presses has inherited the business in the present form, or purchased from the earlier owners or got the same on lease from the earlier owners.

7.5 Background

The Table 7.5 conveys the information about the educational and professional background of the press-owners and press managers of the presses selected for study. The first category obviously is that of the formal training in printing with a degree or diploma or a certificate. Persons having a degree or postgraduation in the printing science is a very rare phenomenon because till 1985 only one place in India, namely Madras, offered a degree course in Printing Technology. In 1985, in Pune a degree course was started. But enough arrangements were available for a diploma in printing in this part of the country. Out of the total of

Table 7.5 : Educational and Professional Background of Press Owners and Managers

	<u>No. of press owners/ Managers</u>	
1. Holding formal training in printing, e.g., degree, diploma certificate course, etc.	13	(24.53)
2. Experience of work at some other press without formal training in the trade	22	(41.51)
3. Degree/diploma of any discipline (other than printing) with no experience	07	(13.21)
4. S.S.C. with no experience	06	(11.32)
5. Below S.S.C. with no experience	03	(5.66)
6. Illiterate with no experience	02	(3.77)
Total :	53	(100.00)

53 printing presses, only 13 press-owners or managers had acquired the formal academic training. This gives the percentage of only 24.53.

The second category in this matter is that of 22 press owners and managers who do not possess any formal training but who have acquired experience from other presses. This forms 41.51 per cent of the total. If these two categories are put together, it is seen that in a total of

35 press-owners and managers (i.e., about 66 per cent) had either formal academic background about this trade or had acquired experience from some other presses before taking up the managerial post or before starting up one's own press. The rest, i.e., 17 of the total (32.06 per cent of the total) had degree or diploma of faculties other than printing and also no experience from the trade, or they were only school leaving passed with no experience, or those having education upto or below S.S.C. level or a category of even illiterate persons. For a successful press from the management and business point of view, it is necessary for press-owners and managers to have both, the formal academic background supported by experience in the technical and management capacities. But the data reveals that this is not so. The functions of the press-owners are mainly to take all the vital decisions, to chalk out the programmes of expansion, diversification and modernization to respond to the rapid technological changes occurring in the industrial field. But the data in the Table 7.5 shows that about 32.06 per cent of the press owners or managers having meagre educational qualifications and having no experience from the field. Thus this fact will certainly have some bearing on the quality of business decisions taken by the press-owners and managers.

7.6 Nature of Business

The act of printing involves several sub-trades and in practice, there are printing presses which undertake the

business of more than one sub-trade simultaneously. There is obviously a tendency towards specialization too. As a preliminary inquiry of the printing presses under study, the data was collected about the business/businesses pursued. The Table 7.6 notes various sub-processes or sub-trades from the printing industry. Each one is denoted by the code : such as, A - denoting letterpress composing, B - letterpress printing, C - photocomposing, etc. The most popular combination of sub-trades in this industry is

Table 7.6 : Type of Business undertaken by Printing Presses

<u>Type of Business or Businesses</u>	<u>No. of printing presses</u>
(Combinations of trades within the industry)	
1. A, B and K	26 (49.06)
2. A, B, H and K	6 (11.32)
3. Only A	3 (5.66)
4. Only E	2 (3.77)
5. A, B, K and L	2 (3.77)
6. A, B, H, K and M	2 (3.77)
7. A, B, C, D, E, J, I and K	1 (1.89)
8. Other combinations	11 (20.76)
Total :	53 (100.00)

Key :	A Letterpress composing	H Screen Printing
	B Letterpress Printing	I Type Foundry
	C Photocomposing	J Block Making
	D Platemaking	K Binding
	E Offset Printing	L Publishing
	F Lithography	M Other related items
	G Electronic Typing	

that of the letterpress composing, printing and binding, which was taken up by nearly half, i.e., as many as 26 printing presses from the sample (i.e. by 49.06 per cent). The process of screen printing (code R from the table) has been added to the printing business by 6 presses from the sample. The screen printing technique is of comparatively recent origin and as the Table shows; it has been taken up by quite a few printing presses as an additional activity. Special mention must be made of the category No.3 and 4 from the Table. Three printing presses from the sample specialise only in the letterpress composing; the printing is not taken up by them but is channelized through some other press. Two presses from the sample carry on only offset printing, the artwork or the platemaking is done by some other agency. Gradually but certainly, this shows a tendency in specializing certain sub-trades and subprocesses within the industry. Out of the total sample, only one unit marks the existence of as many as 8 sub-trades carried out on the same campus, under the same management. But it is an exception or a rarity among the total sample. Combinations such as G and F are not carried out separately but they are associated with other sub-trades and thus these categories have been pooled together under the last item, i.e., the total of 11 printing presses (20.76 per cent of the total) from the total sample.

7.7 Nature of Premises

The next two Tables, (i.e., the Tables 7.7 and 7.8) inform about the business accommodation occupied by the presses. The Table 7.7 reveals that only 19 printing presses, (i.e., 35.85 per cent of the total) own their own premises. Five presses have purchased their premises on the ownership basis. More than half of the total sample, i.e., 29 out of 53 presses (54.72 per cent) have rented premises.

The area occupied by printing presses has been presented in the Table 7.8. It enlists the size-wise categories wherein the frequency distribution of printing presses from the sample has been shown. About half of the total sample size, i.e., 27 out of 53 (50.94 per cent), presses occupy the size of sixty sq. metres or less. There are 13 printing presses (24.53 per cent) which are classified in the next category, i.e., between the area size of 61 sq.m.

Table 7.7 : Nature of Ownership of the Business
Accommodation

		<u>No. of presses</u>	
1.	Owned by the press	19	(35.85)
2.	Purchased on ownership basis	05	(9.43)
3.	Rented premises	29	(54.72)
Total :		53	(100.00)

Table 7.8 : Classification by Area Occupied by the Printing Press

Area in sq.m.	No. of Printing Presses
1) 0 - 60	27 (50.94)
2) 61 - 120	13 (24.53)
3) 121 - 180	04 (7.55)
4) 181 - 240	02 (3.77)
5) Exceeding 240	07 (13.21)
Total :	53 (100.00)

to 120 sq.m. Thus the first two categories of area upto 120 sq.m. has 40 printing presses classified under them, which is 75.47 per cent of the sample. The rest of the categories, i.e., 121 sq.m. and above have 13 printing presses, i.e., about one-fourth of the total sample.

It is interesting to look more closely at the actual area sizes which presses from the sample have occupied. If precise sizes from the schedules were taken up for comparisons, on the one hand, we have the cases of the units with as small a size of about 14 sq.m. (i.e., about 150 sq.ft.); on the other hand, we have unit from the sample recording area of about 6,000 sq.m. (i.e., about 65,000 sq.ft. approximately).

LABOUR7.8 Status

This section deals with the workers from the printing presses selected for study. In Chapter 4 it has been pointed out that several acts are simultaneously applicable to the printing industry. The Factory Act 1948 is the basic act which brings a particular printing firm into the organized sector. Several provisions of the Factory Act deal with the safety of workers, working conditions at the factory, regular payment to workers, etc. All the important provisions of this Act and other relevant Acts have been adequately explained therein. To begin with the legal infrastructure of the printing presses from the sample, the Table 7.9 discloses the applicability of the Factory Act. As the Table denotes, 34 printing presses (i.e. 64.15 per cent) are from the

Table 7.9 : Printing Presses in the Organized and Unorganized Sector

No. of workers	No. of printing presses
1. Unorganized sector	
1 - 9	34 (64.15)
2. Organized sector	
A) 10 to 30	13 (24.53)
B) 31 and onwards	06 (11.32)
Total :	53 (100.00)

unorganised sector, i.e., those printing presses use power but employ 9 or less number of workers. The remaining 19 printing presses from the sample are covered under the Factory Act, i.e., they employ 10 or more number of workers. This works out to be 35.85 per cent of the total sample of 53 printing presses from Pune City.

Among the second category of the printing presses classified under the factory sector, the Table shows the sub-classification of presses employing 10 to 30 workers and those employing 31 or more workers. The former category has 13 printing presses and the latter has 6 printing presses. The last category of presses with more than 30 workers can be said to be the class of big printing presses. The absolute number of workers per printing presses, etc., has been noted in subsequent Tables (Table Nos. 7.10 to 7.13). While taking the tally of workers employed in printing presses, the apprentices have been excluded.

7.9 Size of Labour Force

The Table 7.10 further elaborates the number of workers from printing presses. The Table makes a more detailed reading as far as the average number of workers per printing press. As noted already, 34 printing presses employed less than 10 workers. In the total sample, they form the percentage of 64.15, but all these 34 printing presses employ 172 workers of all categories. These 172 workers form merely 21.67

percentage of all the 793 workers from all the printing presses from the sample. Thus this category of small printing presses on an average has 5 workers per printing press, as shown in the column 4 of the Table. Thus, to repeat, 64.15 per cent of all the presses employ only 21.69 per cent of total workers from the printing presses, showing a less than proportionate number employed per printing press.

Table 7.10 : Workers per printing press

Category	No.of Printing Presses	Total No.of Workers	Average No.of Workers
1. Unorganized sector	34 (65.15)	172 (21.69)	5.00
2. Organized Sector	13	223	17.15
A. (10 to 30 workers)	(24.53)	(28.12)	
B. (31 and above)	06 (11.32)	398 (50.19)	66.33
Total :	53 (100.00)	793 (100.00)	14.96

Similarly, the category A from the organized sector - employing 10 to 30 workers, are 24.53 per cent of the total by number and they employ 28.12 per cent of the total workers, showing the average number of workers per press to be about 17 as far as this category is concerned. The Category B from the organized sector tilts the balance of

the number of presses and the share of them in the total number of workers. Only 6 printing presses in this category employ 398 workers, i.e., employing about 66 workers per press. If this share is put in the form of proportions, we can read from the Table that 11.32 per cent of presses employ about half, i.e., 50.19 per cent of the total workers. If this category is compared with the first category of presses in the unorganized sector, it is observed that the biggest of the press categories employs on an average 66 employees as compared to 5 workers on an average per small press. In this way, if the variable of the number of workers is checked, the first category of unorganized presses are the 'small presses', the presses form the category 2-A are 'medium size presses' and the presses form 2-B class are the big size presses.

If the total of all the presses, i.e., 53 is taken against the total number of workers to be 793, the average number of workers per press is about 15.

7.10 Type of Workers

The Table 7.11 throws light on the types of workers employed by printing presses. It has already been noted in Table 7.6 that letterpress composing, printing and binding is the main activity carried out by the printing industry. Obviously, out of the total workers engaged by the industry, these types of activities engage majority of workers.

Table 7.11 : Types of Workers in Printing Presses - I

Category	Total No. of workers
1. Compositors	271 (34.17)
2. Printers and other jobs in the printing departments	189 (23.83)
3. Binders	123 (15.51)
4. Other jobs such as proof correctors, photo-compositors, processmen, designers, platemakers, etc.	119 (15.00)
5. Establishment - adminis- tration - security staff	91 (11.49)
Total :	793 (100.00)

Compositors, printers and binders are 271, 189 and 123 respectively and they total up to 583 out of the tally of 793 workers, i.e., 73.51 per cent of the total workers.

The next class of workers represented in the Table includes photocompositors, processmen, cameramen, designers, platemakers, etc. Their share in the total workers is that of 119 out of 793, i.e., 15.00 per cent. The last class includes the establishment staff, administrative staff and the persons on the security duty. They are 91 in number, i.e., 11.49 per cent of the total.

The data of the jobwise classification of workers shows a very small share of establishment staff in the total

working staff. Small printing presses, which are in majority have practically no administrative or establishment staff and only a small number of big presses are in a position to employ separate staff for this purpose. Bigger the size of the firm, the size of this type of staff goes on increasing.

The Table 7.12 is the extension of the Table 7.11, in the sense that it goes further to state more elaborate information of the workers from the printing presses under study. This Table simultaneously states the classification of workers from the skill formation point of view. It says how many workers of which category are skilled or semi-skilled or unskilled. While studying the economics of any firm and subsequently for industry, knowledge of the skill formation of workers is of utmost importance. Different grades of skilled workers are paid differently, higher skilled workers receiving higher wages. And skill formation finally affects the quality of the final product. The quality in printing activity has considerable significance and on this variable, a good deal of clients can be attracted and retained for long. But this variable cannot be easily measurable in value terms, yet the quality improvement is one of the prime motives of printing firms.

While giving the distribution of all the workers from the skill formation point of view, the Table also notes

Table 7.12 : Types of Workers in Printing Presses - II

Category of Presses	No. of presses	Skilled				Semi-skilled				Unskilled				Total	Total	Total	Grand Total
		M	F	C	Total	M	F	C	Total	M	F	C	Total	M	F	C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1) Compositors	122	-	-	-	122	41	3	-	44	102	3	-	105	265	6	-	271
2) Printers	91	-	-	-	91	46	-	-	46	52	-	-	52	189	-	-	189
3) Binders	39	-	-	-	39	65	1	-	66	12	3	3	18	116	4	3	123
4) Other job workers	86	5	-	-	91	19	2	-	21	3	-	4	7	108	7	4	119
	338	5	-	-	343	171	6	-	177	169	6	7	182	678	17	7	702

The data of skilled or unskilled etc., for the fifth category in Table 7.11 was not collected.

M = Male
F = Female
C = Child

Col.15 is the total of Cols. 3 + 7 + 11
Col.16 is the total of cols. 4 + 8 + 12
Col.17 is the total of cols. 5 + 9 + 13
Col.18 is the total of cols. 6 + 10 + 14
Cross check - col.18 is the total of
15 + 16 + 17

Skilled - Skilled A
Semiskilled- Skilled B
Unskilled - Skilled C, D and unskilled

whether they are males, females or child workers.

Thus, as noted in the Table 7.11 the total number of compositors from the presses studied was 271. The break up of this number is presented in this way : Out of 271 compositors, 122 were skilled workers - all of them males; 44 were semi-skilled - of whom 41 were males and 3 were females; 105 compositors were unskilled - of whom 102 were males and 3 were females. Thus out of the total of 271 compositors, 265 were males and 6 were females. The percentagewise distribution of compositors is that 45 per cent were skilled, 16.24 per cent were semi-skilled and 38.76 per cent were unskilled.

Similarly the data of printers, binders and other job workers have been presented further in the Table. Out of the total of 189 printers, 91 were skilled (i.e., 48.15 per cent); 46 were semiskilled (i.e., 24.34 per cent) and the remaining 52 (i.e. 27.51 per cent) were unskilled workers. All the 189 workers from this category were male workers.

Out of the total of 123 binders from the sample, 39 were skilled (i.e. 31.71 per cent of the total binders); 66 were semiskilled (i.e., 53.66 per cent) and the remaining 18 (i.e., 14.63 per cent) were unskilled. Of the total 123 binders, 1 was female worker (that from the semiskilled category) and 3 female workers were from the unskilled category. The binders type of workers had 3 child workers

- those of the unskilled type. In the case of the other job workers, they numbered 119; of whom 91 were skilled (76.47 per cent); 21 were semiskilled (17.65 per cent) and 7 workers were unskilled (5.88 per cent). As for the sex ratio of the workers in this category, five skilled and 2 semiskilled workers were females. In this category, 4 child workers were also employed. For the sake of classification on these lines, the fifth category from Table 7.11 has been excluded.

To present the picture in a nutshell, out of the total of 702 workers from these four categories, 343 were skilled (48.86 per cent); 177 were semiskilled (25.21 per cent) and the rest 182 were unskilled (25.93 per cent). Of the total of 702 workers 678 (96.58 per cent) were males, 17 were females (2.42 per cent) and 7 were child workers (1 per cent).

While recording the type of workers such as skilled or semiskilled, etc., skilled A were classified as skilled, skilled B were classified as semiskilled and skilled C, skilled D and unskilled were classified together as unskilled workers.

The participation of female workers in the jobs within the printing industry needs a special mention. The printers' category (category No.2 in the Table 7.12) involves the operations with machines, tedious makeready operations, handling heavy metal chases, plates, handling heavy reams of

paper, etc., and thus no female workers nor any child worker are observed to be employed for this type of job. As against this, the composition of matter with the use of metal type does not involve any operation of machine and the job is less strenuous. The same is true for the jobs in the binding department and other jobs in the printing presses. The jobs of proof readers, photocomposition, darkroom operations in the offset printing press can very well be taken up by women workers.

7.11 Nature of Employment

The Table 7.13 conveys information about the nature of jobs which the printing industry provides. The security of job has been classified therein as temporary, permanent and contractual/piecewage workers. It was noticed during the survey that many presses have a regular practice of employing workers on the contract basis. Printing presses resorted to this practice all the time except a few days of "slack season". The Table shows that 223 out of 793 workers (28.12 per cent of the total) were the contractual and piece wage workers. Two hundred forty five workers (30.90 per cent) were having temporary employment and 325 workers (40.98 per cent) were permanent. The jobwise nature of employment has also been recorded in the Table. For instance, binding departments have comparatively the highest percentage of piece rate workers, they are 43.90 of the total as against

20.33 per cent temporary and 35.77 per cent as permanent workers. Office and establishment had no piece rate workers at all. What considerations underlie the system of recruiting piece wage workers is a matter which deserves serious attention but that discussion shall be taken up at a later stage.

Table 7.13 : Nature of Employment

Sub-Trade within the Printing Press	Nature of Employment of Employees			
	Perma- nent	Tempo- rary	Contractual and piece wage employees	Total
1) Composing	80 (29.52)	93 (34.32)	98 (36.28)	271
2) Printing	97 (51.32)	31 (16.40)	61 (32.28)	189
3) Binding	44 (35.77)	25 (20.33)	54 (43.90)	123
4) Other jobs	39 (32.77)	70 (58.82)	10 (8.40)	119
5) Office and establishment staff	65 (71.43)	26 (28.57)	-	91
Total :	325 (40.98)	245 (30.90)	223 (28.12)	793 (100.00)

7.12 Size of Earnings

The Table 7.14 uncovers the facts about wages and salaries paid to workers and establishment staff of printing

Table 7.14 : Amount of wages/salaries paid

Sub-trade in the industry	(Amount in Rs.)		
	Permanent	Temporary	Contractual and piece wage employees
1) Composing	650	575	600
2) Printing	700	625	600
3) Binding	580	530	500
4) Other jobs	750	700	680
5) Office staff	760	600	-

presses. The payment has been recorded category-wise, i.e., payment going to compositors, pressmen, etc. The payments going to permanent staff and temporary have been shown separately. The figures indicating payment to permanent and temporary staff include average pay, allowances and overtime payments. The annual total of all the compositors and printers, etc., has been averaged out per month and the arithmetic mean of all the compositors, etc., has been taken per printing press responding. The average of all the printing presses has been recorded in the Table. It was observed during the survey that all the presses do not have the practice of overtime work. And even though the same is available, it is limited to only a few months of the year. Therefore, while recording the monthly pay figure in

the schedules, the overtime payments were added to the monthly pay totals and were averaged out for one month. In the case of the staff employed for less than a year in the past, the average is drawn for that duration over which he was employed by the responding printing press.

The last column from the Table needs some elaboration. Many presses - but not all, have practice of getting the part of the work done through piece wage workers and contractual workers. The system of contractual labour is very widely prevalent in farming or construction activity. The same has not been taken up so widely by this industry. The main reason being that the jobs within this industry are not universally standardized. Each job is a unique creation. Strict quality maintenance is expected at each stage; and mass production is ruled out. But some jobs do invite this type of system, such as the electoral lists at the time of elections. The contractual workers are not directly in contact with the employers. But at the time of survey, the information regarding this type of workers was collected and thus has been exhibited in the Table referred to above. The nature of payment to contractual workers is similar to that to piece wage earners. While recording the figures of their earnings, their earnings according to the work put in by them has been averaged out over the relevant duration of time as if they were the time rate workers. This is to a great

extent unscientific because this makes comparisons impossible. But these figures are included in the Table only to show roughly the extent to which these earnings are probable.

The conclusions from the comparison between columns 2 and 3 from Table 7.14 are obvious. Due to comparatively longer service and higher possibility of getting overtime work, the total monthly pay, on an average, of permanent staff is greater than the temporary staff. As noted in the preceding paragraphs, the comparisons between the time rate workers and piece rate workers for their monthly pay are not possible.

The payment noted in columns 2 and 3 in the Table can be compared with the minimum wages recommended and practised in this industry. The months when the survey was conducted had the following minimum wages in Pune as per the categories noted below:¹

Category	Minimum Wages Rs. p.m.		Special Allowance Rs. p.m.		Total Rs. p.m.
1. Compositors	250	+	352	=	602
2. Printers	250	+	352	=	602
3. Binders	205	+	352	=	557
4. Other jobs	205	+	352	=	557
5. Office staff	225	+	352	=	577

A glance at the Table 7.14 along with the chart noted above makes the comparisons of the recommended minimum wages and actual wages earned quite obvious. On the face of it, the conclusion is clear that the law of minimum wages is followed by the printing presses in Pune, we take into account the average of the category-wise wages paid by the industry. But adequate precaution is to be taken to accept this conclusion. The first and the foremost is that the figures noted in the Table 7.14 include the overtime payment too. Overtime payment as and when paid during the year has been added to the total wages and the same has been averaged out to be included in the Table. The minimum wages are recommended for the standard 8-hour daily work and overtime wages are at double the hourly rate; and paid extra to the usual wages. Printing presses in the organized sector maintain the separate account of wages and overtime wages and were in a position to furnish the figures separately. But the presses in the unorganized sector could not furnish the figures separately in all the cases and thus to enable comparisons between statistics of the same homogeneous nature, the wages with overtime have been taken. It has already been stated that the overtime work is hardly available round the year and is available only for a few weeks of the year. Thus, to conclude, the average wage rates prevailing in the industry in the case of all the permanent workers and most of the

temporary categories seem to be comfortably above the minimum wage limit but that is due to overtime wages.

There is another reason why the actual wages paid exceed so liberally the minimum recommended wages. For instance, the Table puts all the printers, that is operators of printing machines in one and the same category. But in fact, some of the categories among printers have been recommended still higher minimum wage scale than depicted in the chart above. In offset printing presses (and we have many offset printers in the sample of 53, refer to Table 7.6 category) and photo compose operators (category C in Table 7.6) the stipulated minimum wages in Pune are Rs. 295 (highly skilled) + Rs. 352 = Rs. 647 p.m.² Though their number in respective categories is small, it is significant enough to take up the average to a higher side. This another count which arrests us to draw a straight conclusion about the adequacy of the wages paid.

The law of averages has undoubtedly played its role, suggesting that there are some presses which pay lower than the stipulated minimum wages. The temporary category compositors have given an average which is lower than the minimum wage.

7.13 Piece Wage Earners

The Table 7.15 records the responses to the query made in the schedule as to what percentage did the piece rate

wages form in the total monthly/annual wage bill. As the Table makes out, 28 printing presses from the sample of 53 presses (i.e. 52.83 per cent of the total) do not employ any piece rate workers. Out of the remaining presses, 3 presses spend less than 10 per cent of their annual wage bill on this type of workers. Five presses spend between 11 per cent and 20 per cent of their wage bill on this type of workers. Ten presses spend 21 per cent to 30 per cent of their wages on the piece rate workers. There is only one case of a printing press which paid between 40 per cent to 50 per cent of its annual wages on the piece rate basis. Thus, it can be said roughly that a little over half of the sample does not have the piece rate employment of workers at all. The

Table 7.15 : Share of contractual and piece wages to total annual wages paid

Percentage group	No. of printing presses	
Nil	28	(52.83)
1 to 10	3	(5.66)
11 to 20	5	(9.43)
21 to 30	10	(18.87)
31 to 40	6	(11.32)
41 to 50	1	(1.89)
Total :	53	(100.00)

arithmetic mean of the 25 presses which resort to this type of employment works out to be 23.80 per cent, meaning thereby that those presses which follow this practice spend about 24 per cent on their annual total wages on these workers. The rest going on the time rate workers.

The printing presses in Pune present a mixed picture regarding the piece wage employment. Nearly half of the sample follows this practice, as noted in the preceding paragraph. Even though their share in the total wages was not much, the mean percentage of the 25 printing presses worked out to be 23.80 per cent only. But in smaller or bigger form or in short or long duration, this practice spread over a long period of time during the year. The Table 7.16 has noted this tendency. Three presses have reported that they have to engage piece rate workers to supplement their main work for a duration not exceeding 2 months. Ten presses employ them for the time period between 2 months and four months. On the other hand, there are 3 printing presses from the sample which employ them for the time period exceeding 8 months of the year. Two presses employ this type of labourers but have not specified the duration of their employment.

7.14 The System Examined

The preceding chapters have noted that the use of piece wage workers has been an established practice with

Table 7.16 : Nature of Employment of Contractual/Piece Wage Employees

Duration of Employment during the year	No. of printing presses	
Less than 2 months	3	(5.66)
2 to 4 months	10	(18.87)
4 to 6 months	4	(7.55)
6 to 8 months	2	(3.77)
More than 8 months	3	(5.66)
Cannot specify	2	(3.77)
Do not employ at all	28	(52.83)
Not reported	1	(1.89)
	53	(100.00)
Total :		

many presses in the city of Pune. The survey noticed that the small presses were more inclined to follow this practice. The Table 7.17 enlists some of the advantages which the presses from the sample claimed vis-a-vis the system of the piece wage workers. The preceding Table has noted that the duration over which the presses tend to employ piece wage workers is roughly about 4 months. This Table records the specific advantages as noticed by such presses. The majority of this type of presses have said that they do so to tide over the rush orders. Some of the printing jobs have a very short delivery date and use of extra labour only makes

it possible for them to catch the date of delivery. Nine out of 24 presses came out with this justification for this type of employment of workers. Six printing presses viewed the situation from another angle. They were unanimous in saying that this system was advantageous because workers tended to put in a more speedy work. Since the payment of their wages depended more on the quantum of their work rather than the time at work, they obviously tended to make most of it. Four printing presses felt that this type of labourers were advantageous because they worked on lower wages. Since these labourers show more rapid pace of their work, i.e.

Table 7.17 : Advantages claimed of the piece wage/
contractual payments

Advantages claimed	No. of presses
1. Helps to tide over the rush orders	9 (37.50)
2. These workers tend to work more speedily	6 (25.00)
3. They work on comparatively lower wage	4 (16.66)
4. The workers feel happy because they earn in proportion to the work put in	3 (12.50)
5. Miscellaneous	1 (4.17)
6. Did not specify	1 (4.17)
Total :	24 (100.00)

comparatively more output per unit of time, the employers can claim that quantum of wages to be lower per unit of output than the time rate workers. Employers also find a more comfortable position as far this category of wages. Along with the wages in cash, the employers pay directly and indirectly still something more to time rate workers in terms of paid leave, provident fund, bonus, etc. The piece rate workers are not entitled for these benefits and thus employers find it more economical to take advantage wherever they feel it necessary.

Some presses noted yet another advantage of this system. They view this situation from the point of view of workers. The workers feel they receive full justice under this scheme because they are paid in proportion of their work carried out. More the output, more the wages. Workers get an incentive to work harder. Three presses out of 24 have come out with this aspect worth going in favour of the piece wage payments. One press from the sample gave a general statement about the advantage possible from this system. While one press could not specify precisely the advantages asked for by this query.

No system is foolproof and there are bound to be some disadvantages felt in the case of any system. This is evident from the Table 7.18 wherein the disadvantages noticed by printing presses in the case of piece rate system have been presented. The first and foremost of the disadvantages

Table 7.18 : Disadvantages experienced of the piece wage employment system

Disadvantages Noticed	No. of presses
1. Tendency of irresponsibility because of lack of employer-employee relation	5 (20.83)
2. Absenteeism of high level	9 (37.50)
3. This type of workers do not show quality and skill in their job	3 (12.50)
4. High tendency of leaving job half finished	4 (16.66)
5. Considerable wastage of material involved	1 (4.17)
6. No disadvantages at all	1 (4.17)
7. Not specified	1 (4.17)
Total :	24 (100.00)

noticed by printing presses is about the lack of commitment and responsibility which is developed under this system because of the absence of any formal employer-employee relation. Five presses out of 24 expressed this feeling. A regular employee of a firm can show more responsibility, integrity, commitment and accountability than casual workers like the piece wage workers. They are not aware of the traditions and practices within the firm and are likely to keep distance from the colleagues and the supervisory staff.

Unity of purpose and action is a precondition for effective management of personnel. But since this staff is a floating staff, this unity is hardly achieved and this alien attitude finally affects the productivity of the worker. This type of workers cannot work as a homogeneous group.

The same Table has noticed the response of 9 printing presses in terms of the high degree of absenteeism. This observation of the presses in fact logically follows from the first disadvantage noted in the Table. Once the workers fail to develop sense of attachment with the firm where they are working, they tend to keep away from work without any proper reason and notice. The flow of work is seriously disturbed when the manager suddenly notices a worker not reporting for work. It becomes difficult, under such circumstances, to keep the delivery dates which consequently affects the reputation of the firm. Since this type of workers is not governed by any type of leave rules or any other regulations, they can keep away from work, thus putting the employers to a lot of inconvenience. It is for this reason that largest number among the 24 printing presses in this category has put on record this kind of disadvantage.

It has already been noted that workers of this type tend to work speedily as they get paid in direct proportion of the total work they contribute. But since speed is the only objective which guides these workers, the quality and

skill expected of workers is scarcely present. The importance of quality, artistic presentation and elegance can hardly be overemphasized, especially in the art of printing. The job where quantity is the only gauge for making payment, the quality is bound to be sacrificed.

Another variety of absenteeism which the presses noted was that of leaving the job half finished. This may be because the worker concerned found another job on more attractive terms and conditions or he might get a bigger lot of work than a smaller one. Since the workers are of the type of the floating nature, this tendency was visible in the case of 4 printing presses. Needless to say that this tendency also seriously hamper the punctuality of the job work and thus printing presses are put to a lot of disadvantage.

One press reported that the lack of responsibility and casual approach of workers resulted in considerable wastage of material. For instance, to complete as much higher a print run as possible during the day, the printers tend to use more drier in the ink than is normally used, which is otherwise quite unnecessary.

One of the respondents could not specify any observation as a demerit of this system even though he felt certainly some disadvantage in the system. One respondent felt that the system had no disadvantages at all.

In the subprocesses in printing where quantification was possible, this system was more practised. Big printing presses having supervisory staff of high calibre and experience was in use, avoided this practice. The smaller presses who experience high fluctuations in their activity through the year had to resort to this system. Most of the presses who were vocal and explicit in revealing the disadvantages of the system agreed that this was a kind of necessary evil in this industry. Some printing presses looked at these workers a possible recruits at their presses in future. Workers of high skill could be employed on the regular roll and pay scale, allowing them several facilities like other workers and besides that the stability which the workers normally expect. Piece rate system of employment could be used as training ground for further recruitment in the press in suitable vacancies.

7.15 Recruitment

The presses were asked to state as to how they recruit their workers. The Table 7.19 notes the responses thereon. They were given several alternatives and were asked to tick out the alternative which they choose. Recruitment through employment exchange received the lowest rating among all alternatives. Only 2 presses have reported to be following this method. Five presses follow the path of putting advertisements of their vacancies. Nine presses recruit

Table 7.19 : Mode of Recruitment of Workers

Method	No. of Presses
1. Through Employment Exchange	2 (3.77)
2. By giving advertisement	5 (9.43)
3. Through acquaintance	9 (16.98)
4. By direct interview	7 (13.21)
5. Through a middlemen	7 (13.21)
6. After giving trial	3 (5.66)
7. Combination of 2 and 4	9 (16.98)
8. Combination of 2, 3 and 4	11 (20.76)
Total :	53 (100.00)

their workers through someone of acquaintance, a friend or colleague in business. The friend or colleague, it is believed would vouch for the skill, sincerity and honesty of the worker. Seven presses follow the direct interview method. Whenever any prospective employee approaches the press for job, depending on the vacancies available, the interview is held and the selection and appointment depend upon the performance in the interview. Some middlemen also work as the suppliers of the workers and they act as an agency in this industry. Seven printing presses expressed their view in favour of this method. Three printing presses followed a very straight forward method of selecting their staff.

They asked the prospective recruit - a compositor or a binder to work at their press for a day, they would see how he works, his skill, his speed of work and the quality which he shows and then only would go ahead to employ him. Nine presses have reported to be opting for advertisement and interview methods together. Eleven printing presses, which is the largest group among the responses reported to be resorting to the advertisement, acquaintance and interview methods together.

It can safely be concluded from Table 7.19 that the printing presses in Pune follow more informal methods of recruitment of workers. Formal methods like employment exchange or advertisement have found favour by only 7 presses (i.e. 13.21 per cent of the total). The rest of the presses rely more on the informal and personal methods of selecting and employing workers. This is partly due to the nature of this industry which is dominated by small firms and partly due to the art and skill based activity in this industry.

7.16 Trade Union Membership

Membership of trade union is another aspect of the contemporary socio-corporate life. The query was put to the press proprietors and managers as to how many of their workers were members of trade unions. In some cases, the employees did not have clear idea as to how many of their workers were union members. Unions obviously are more

active when they have an issue to get resolved or finally resort to closure of work and strike. During the months when this data was collected and a few months before it, the printing press industry in Pune had comparatively peaceful labour relations and so the trade union activity was on the low key. It is also true that the accuracy of the data presented in Table 7.20 might have some limitations because of imperfect reading of the workers' union membership from the employers.

Nine presses (16.98 per cent of the total) did not report on this matter. Eight presses said that the union membership among their workers was either zero or negligible. Ten presses (18.87 per cent of the total) reported 20 per cent or lower membership among their workers. If an average of all the percentage groups is taken, it is seen that about 24 per cent of press workers are members of trade unions.

7.17 Loss of Work

It was stated in one of the preceding paragraphs that the labour relations in Pune were more or less peaceful and cordial when this survey was held. The Table 7.21 is an evidence of this observation. The responding presses from the sample were asked to furnish data about the history of strike, lockout, gherao or stoppage of work in the preceding year. It was seen that this type of disturbance was largely absent and this is supported by the response of 49 presses

Table 7.20 : Percentage of Workers as Members of Union

Percentage	Workers from the number of presses	
Zero and negligible	8	(15.09)
Less than 20%	10	(18.87)
21 to 40%	9	(16.98)
41 to 60%	6	(11.32)
61 to 80%	6	(11.32)
81 to 100%	5	(9.43)
Not reported	9	(16.98)
Total :	53	(100.00)

Table 7.21 : History of Strike/Lockout/Gherao/
Stoppage of work, etc.

No. of cases	Involving number of printing presses	Loss of total mandays
Zero	49 (92.45)	-
1 to 5	3 (5.66)	80
6 and onwards	1 (1.89)	90
Total :	53 (100.00)	170

out of 53 (i.e. 92.45 per cent of presses from the total) saying that no case of this kind of labour problem was experienced by them. Three presses (5.66 per cent of total) reported 1 to 5 cases of this type of phenomenon and only

1 press reported 6 or more than 6 cases occurring during the previous year. Thus, in total 4 presses (7.55 per cent) reported stoppage of work of one kind or other.

The Tables 7.22 and 7.23 record respectively the causes of the labour dispute and the method deployed to

Table 7.22 : Causes of work stoppage due to any type of labour dispute

Cause	No. of presses wherein the cause of applicable
1. Low and irregular wages	2
2. Cause not specified	2

Table 7.23 : Method followed for resolving the dispute with labourers

Method	Used by number of presses
1. Mutual negotiations	4
2. Through labour court	-
3. Through arbitrator	-
4. Unresolved	-
5. Unspecified	-

resolve the same. Out of the 4 presses which reported the strike or other phenomenon, two presses said their work stoppage of work was due to low and irregular wages. The remaining two presses chose to be silent about the cause of the labour trouble and they did not specify any cause of the strike. As the Table 7.23 denotes, all the presses held mutual negotiations and got the issues resolved. None of the presses followed the method of labour court or through an arbitrator.

Stoppage of work due to mechanical failures was a fairly regular phenomenon. The Table 7.24 notes the occurrence of this phenomenon at 39 printing presses (about 73.58 per cent of total) out of the sample of 53 printing presses. Seventeen presses stated the reason of the stoppage to be machine failure and stating further the loss in terms of mandays to be about 200. Twelve presses experienced frequent stoppage of work due to old and obsolete - outdated machinery. This according to their estimate involved the loss of 280 mandays during the year. Ten presses said they experienced both the causes to be existing and resulting into the loss of the total of 300 mandays. The remaining 14 presses did not report any stoppage of work due to mechanical reasons. The total of 780 mandays were lost during the previous year. If the total of 793 workers is taken (Refer to Table 7.10) to be working for 300 days throughout the year, the total mandays within the printing presses under sample works out

to be 2,37,900 and the proportion of the loss of mandays due to mechanical failure works out to be about 0.33 per cent. This looks to be a negligible percentage but it is certainly avoidable. Better and regular maintenance of machinery, timely replacement of old and outdated machinery would still reduce this percentage and thus the loss of mandays.

Table 7.24 : Stoppage of Work due to Mechanical Reasons

Cause	Involving number of presses	Loss of Mandays
1. Machine failure	17 (32.08)	200
2. Obsolete machinery	12 (22.64)	280
3. Both the reasons	10 (18.87)	300
4. No stoppage of work	14 (26.41)	-
Total :	53 (100.00)	780

The next Table, i.e., Table 7.25 enumerates the other causes of the stoppage of work during the printing activity. It is the power cut and load-shading. During the months when the survey was conducted, the situation on the front of power supply was comparatively much comfortable. As is reported in the Table, only 5 presses reported of power cut during the year and according to them it involved the loss of about 170 mandays due to it. The phenomenon of load shading was reported by 11 presses, resulting into the loss

Table 7.25 : Other Causes of Stoppage of Work

Cause	No. of presses affected	Loss of mandays
1. Power cut	5	170
2. Load shading	11	290
3. Presses not reporting	37	-
Total :	53	460

of 290 man-days. The remaining 37 presses were unanimous in saying that they did not experience any power cut nor any degree of loadshading. The total of 460 mandays were lost during the preceding year due to this cause. If this loss of 460 mandays is added to that of 780 mandays as reported in the Table 7.24, the total loss is 1,240 mandays. If this is compared with the hypothetical maximum of 2,37,900 mandays work by the presses under sample during the year, the proportion works out to be about 0.52 per cent. It has already been pointed out that there is sufficient room for improvement in the situation by reducing this loss of mandays.

7.18 Problems with Workers

Table 7.26 presents a few problems of skilled workers as faced by the presses under study. The Table 7.12 has presented the data of the skilled and unskilled workers separately. Each type of workers posed certain problems,

Table 7.26 : Problems of Skilled Workers faced by Printing Presses

Problem	No. of Printing presses reporting this problem
1. They always ask for higher wages	9 (16.98)
2. They tend to leave job abruptly	12 (22.65)
3. They are just not available	15 (28.30)
4. They are somewhat lethargic	8 (15.09)
5. Even skilled workers fall short of our expectation of quality	8 (15.09)
6. Not reporting	1 (1.89)
Total :	53 (100.00)

quite different in nature and presses were asked to record them. The presses were vocal as far as the problems of workers were concerned. All the presses reported except one. Nine presses (16.98 per cent of the total) felt that the skilled workers were always unsatisfied with their wages and they always asked for a raise in wages. A slightly higher percentage, i.e., 22.65 per cent of the total, i.e., 12 presses noticed that these workers tend to leave job frequently. This may be according to them, because they are skilled and they can get job anywhere. The cause which received the highest rating was that the skilled workers were really scarce. They were never available, if they were

around they were not in adequate number. This problem was a widespread one and it hampered the functioning of the press, quality of job and maintaining delivery schedule, etc.

Eight printing presses thought (i.e., 15.09 per cent of the total presses) that these workers were lethargic, did not put in the best of their ability and thus gave out lower productivity than their potentiality. This again might be because they were skilled and had a kind of bargaining power in their hand.

An equal number of 8 presses reported that even the skilled workers were not so skilled. In the industry where quality and punctuality is a key factor in the success of business, maintaining high skill, standard and professionalism in work was of utmost importance. Not only maintaining skill but even improving skills was need of the day to cope up with growing demand, and use of more sophisticated technology. The presses which brought out very specialized quality product, which exported their printed product, which had a reputation of artistic colour printing, etc., had a complaint of this nature. Because a slight mistake would make them pay a heavy price in terms of job rejection, loss of repeat orders, etc.

Table 7.27 is the counterpart of the above Table. It enumerates the problems which the presses feel about the unskilled workers in their employment. Eleven presses have

Table 7.27 : Problems of Unskilled Workers faced by Printing Presses

Problem identified	No. of Printing Presses recording the problem
1. Considerable degree of irresponsibility experienced	9 (16.98)
2. High wastage of material	9 (16.98)
3. High incidence of alcoholism	10 (18.87)
4. They are too unskilled to be of any reasonable use	14 (26.42)
5. Not reporting	11 (20.75)
Total :	53 (100.00)

reported that they have no problems as far as these workers were concerned. But the remaining presses certainly had some genuine difficulties in getting work done from this type of workers. Nine presses reported that the unskilled workers developed a sense of irresponsibility. This was probably because no independent job could be assigned to them due to their lack of skill and capacity. This particular situation necessitated closer supervision and in turn the output per unit was slower. An equal number of presses i.e., 9 presses complained that this type of workers wasted a lot of material, e.g., wasting ink, kerosene, lubricants, etc. This in turn necessitated a higher supervision time and cost on them. Ten presses complained these workers

had a high degree of alcohol addiction. The largest number of the respondents, i.e., 14 presses (26.42 per cent of the total) were very certain that all was not well with this type of unskilled workers but they were less precise in revealing their response. They simply said that the unskilled workers were not of any reasonable use.

7.19 Accidents

The Table 7.28 presents the information of the history of accidents at the work place during the preceding year. The situation seems to be reasonably satisfactory as in total 4 presses only reported the accidents occurred at their presses. Three minor and only 1 major accidents were reported and minor accidents had 4 persons involved and major accident had 1 person involved. There was no fatal accident occurring in any of the printing presses during the preceding year.

Table 7.28 : History of Accidents in the Printing Presses

Nature of Accident	No.of Presses involved	No.of persons involved
Minor	3	4
Major	1	1
Fatal	-	-
Total :	4	5

Obviously the survey also checked if the presses kept the first aid box at hand. In fact, it is one of the provisions of the Factories Act 1948 and we have as many as 13 presses which were classified under the Factory Act. The factory inspector is supposed to check the availability of the first aid box on the premises.³ It was noticed that all the factory sector presses and also some more presses had the first aid box equipment installed on their premises. In fact, 20 presses (37.74 per cent of the total) had this equipment. Thirty presses did not have it, probably they did not think it necessary to have it installed. Three presses did not report positively or negatively on this point. Thus, a mechanical process where accident was very well a possibility and first aid equipment quite a necessity, the Table 7.29 shows that more than half, i.e., 30 presses (56.60 per cent

Table 7.29 : First Aid Provisions

	Number of printing presses	
1. No.of presses having First Aid Provisions	20	(37.74)
2. No.of presses without such provisions	30	(56.60)
3. No.of presses not providing information	3	(5.66)
Total :	53	(100.00)

of the total) did not keep it.

7.20 Medical Facilities

The next Table (Table 7.30) provides the data of other medical facilities available at printing presses. The first one of these facilities is obviously the regular medical check up, may be once a year at least, which is expected to be held among the press workers. But none of the presses has the system of regular medical check-up. Only three presses (i.e., 5.66 per cent of the total) have the facility of providing free or subsidized medicines when required in the case of illness of the workers. Other type of medical help in the case of sickness, disease and accidents is provided by 15 presses (i.e., 28.30 per cent of the sample).

Table 7.30 : Nature of other Medical Facilities Available

Item	No. of printing presses providing the facility
1. Regular medical check-up	-
2. Free/subsidized medicines when required	3 (5.66)
3. Medical help only in the case of sickness, disease, accident	15 (28.30)
4. Medical check-up before appointment	4 (7.55)
5. No medical facilities	31 (58.49)
Total :	53 (100.00)

Four printing presses employ their workers only after their medical check-up. There are 31 printing presses (58.49 per cent) of the total which do not provide any type of medical help, regular or even at the time of illness and accidents to their working staff. Printing presses could be more dutiful about the medical help but the situation prevailing in Pune shows they are apathetic and inactive about this important service.

7.21 Occupational Diseases

The next Table (Table 7.31) is a more specialised inquiry of the workers from the printing presses. It inquires into the possible occupational diseases which are associated with the act of printing. The process of composition with metal type involves constant handling of the lead metal and is a possible source of lead poisoning in extreme cases. The printing of the composed material with the letterpress process especially, involves the operation of machine of high pitch volume for longer hours. There are several short term and even long term effects if pressmen are exposed to high noise of machines for long duration per day and for years at a stretch. While making an inquiry into this court, the whole problem of possible ill effects on the health and ability of workers were explained to the respondents. It was noticed that the general lack of knowledge of this type of possibility was prevalent among the printing

Table 7.31 : Occurrence of any Special Disease among
Workers

Nature of Disease	Reported by number of presses	Number of persons reportedly affected
1. General weakness nausea, headache	1	3
2. Lead line on gums	2	9
3. Muscular pain and insomnia	-	-
4. Hearing loss	-	-
5. Hearing handicap	2	10
Total :	5	22

presses. Some degree of apathy indifference and insensitiveness was also noticed. But the present study attempts to seek some insight into the complicated problem of occupational health hazard of printing industry.

To begin with, about the noise effects in the act of printing. Excessive noise, especially of machines is one of the most common causes of hearing handicap and hearing loss;. The United States Department of Labour estimates that 26 per cent of 14.3 m production workers in the U.S.A. were exposed to noise levels in excess of 90 decibels for 8 hours exposure per working day.⁴ According to the WHO, the excessive noise has the following effects : (a) interference with communication (b) temporary or permanent hearing loss

(c) disturbance of sleep (d) stress (e) annoyance (f) low efficiency in performances (g) fatigue,⁵ The present study could not verify precisely as to which printing presses had machines exceeding the tolerable noise level as the verification process involves prolonged monitoring by experts and technicians. Besides, the tolerance level changes according to age, physical fitness, duration of exposure to noise, etc. Therefore, noise measurement was ruled out from the purview of the present study. But the effects of noise and noise prevention measures were very well checked by the present survey.

Similar is the case with the lead poisoning. The effects of lead handling on health depend upon the duration of handling, age of the worker, his personal health and hygiene, etc. The earlier symptoms are too vague and common.⁶ Loss of appetite, or nausea or fatigue cannot establish a causal connection with lead poisoning directly and immediately. The Booklet on Diagnosis of Occupational Diseases by Expert Committee or Workmen's Compensation Act, Directorate General, Factory Advice Service and Labour Industries, Ministry of Labour, Government of India, New Delhi, 1974 lists several signs and symptoms which are commonly observed about lead poisoning. Some of them are : gastroinstestinal disturbances, constipation, lead line in gums, lassitude, irritability, headache, backache, pain in joints, weakness of grip, tremors

of fingers and tongue anaemia, jaundice, etc.⁷

Dr. C.V.R. Mohan Rao took out a sample of workers from industries including the printing industry and compared the same against the group not exposed to lead. He could discover the occurrence of weakness, constipation, muscular weakness, dizziness, insomnia, pain, etc.⁸

The data about the printing presses was collected from the press owners/managers and therefore their observations of the workers' health are too distant and contain a high degree of malobservation and underobservation. Therefore, the contents of Table 7.31 are more of indicative nature rather than the report of any health survey because there was none. When the effects of the exposure to noise and lead were explained to the respondents, 5 presses came out with the responses which according to them can be connected to their participation in the act of printing. These five presses involved 22 workers putting forth several complaints as noted in the Table. Lead line on gums was observed by 2 press respondents, involving 9 workers; hearing handicap was again reported by 2 presses, involving 10 workers and general weakness and nausea was complained by 1 press respondent involving 3 workers. Hearing loss and muscular pain, insomnia were reported by none. It has been noted earlier the findings of the Table 7.31 are only suggestive of a possible occurrence of these cases on a larger scale than

is implied here and emphasizes a need for a more thorough probe into the matter.

7.22 Addiction

As a sequel to the inquiry of the occupational disease and its occurrence, the data of the alcohol addiction was also collected. It is widely believed that the alcoholism is extensive, especially among the working class. But when it comes to precise inquiry supported by actual data if possible, the responses are vague and undefined. Here also some degree of vagueness has crept in because the prejudice of the respondent regarding the workers' drinking habits. The respondents were specially told to be objective and unbiased while recording their response. The Table 7.32 records these responses. Two presses from the entire sample reported that 75 to 100 per cent of their workers were alcoholic. Three presses reported this percentage to be between 50 and 75, 5 presses maintained this percentage to be between 25 and 50 per cent. Seven presses said less than 25 per cent of their workers were alcoholic, fifteen press respondents thought that a high percentage of their workers was alcoholic but they rushed to add that they could not specify the percentage of workers addicted to alcoholic drinks. Ten respondents were certain that their workers were alcoholic but they were unsure and said that the proportion was low, since they could not specify the percen-

Table 7.32 : Proportion of Alcoholic Workers

Percentage of Workers	Reported by No. of Respondents	
75 - 100	2	(3.77)
50 - 75	3	(5.66)
25 - 50	5	(9.43)
Less than 25	7	(13.21)
Zero	8	(15.09)
Positive, very high	15	(28.30)
Positive, very low	10	(18.87)
Not reported	3	(5.66)
Total :	53	(100.00)

tage. Three presses did not propound any response while 8 presses said this proportion was zero.

This inquiry had twin objectives to be met. An attempt was made to find out the proportion of alcohol addiction in general. While discussions, it was also asked whether the alcoholism affected the behaviour at the work place or performance during the working hours. On this the response was more or less unanimous to say that it did not affect the performance as such. While it is a matter of satisfaction according to the employers that the performance of workers was not affected by their alcoholism, it is indeed a matter of concern that as many as 50 presses out of 53 were explicit in reporting this menace. Its impact on family budgets and personal health can only be imagined.

7.23 Double Employment

The Table 7.33 notes another feature of the behaviour of workers. Many workers have a tendency to accept a part time job or a job on contract basis, in addition to the full time job already at hand. This is done mainly for two reasons : to supplement one's income by accepting additional job of the 'moonlighting' nature⁹ and make use of the spare time available at hand for productive purpose. Also, the workers feel some security of a substitute job at hand in case the present job is lost due to some reason. This is

more true of temporary workers, who, in search of a secure job show a higher tendency of double employment. Unskilled and temporary workers are comparatively a lower paid lot than the rest and they also show a higher tendency for parallel employment. The Table presents the responses from the printing presses about the double employment. Six presses said none of their workers have any parallel employment. Five presses confessed they had no knowledge of this type of extra employment of their working staff. Two presses did not give any reply. Those who had some positive percentage of their workers having double employment have revealed

Table 7.33 : "How many of your workers have double employment?"

	No. of responding printing presses
Zero	6 (11.32)
Below 20%	5 (9.43)
21 to 40%	8 (15.09)
41 to 60%	15 (28.31)
61 to 80%	8 (15.09)
More than 80%	4 (7.55)
No knowledge	5 (9.43)
Not replied	2 (3.78)
Total :	53 (100.00)

their percentages as noted in the Table. Five presses said less than 20 per cent of their workers have double employment, 8 presses noted that between 21 and 40 per cent of their workers have double employment and 15 press proprietors said between 41 to 60 per cent of their workers had double employment and lastly 8 presses revealed that between 61 and 80 per cent of their workers had double employment. The arithmetic mean of the responses of all the presses works out to be about 37 per cent suggesting that about 37 per cent of the total workers from the sampled printing presses from Pune accept some kind of double employment. ..

While collecting statistics on this count it was noticed that some degree of malreporting on the part of employers might have taken place because the employers might not have that precise knowledge of their workers as far as their extra employment was concerned. On the part of employees, they have a tendency to conceal from their employers that they have some extra job undertaken. It was also observed that the availability of the parallel employment is only seasonal, the employers do not always have an upto date knowledge about the moonlighting prevalent among their workers.

The reaction of the employers vis-a-vis the tendency of moonlighting was not checked through any question or

query from the schedule. But informally at the time of data collection this point was certainly discussed with the employers. The approach of the discussion was to see whether this affected the efficiency - sincerity of workers. The employers pointed out that the double employment to a certain extent led to labour absenteeism. Some urgent call from the 'evening' employer would keep the worker away from work and that finally affect the work schedule. An extra provision for earning made workers complacent and as noted by the employers they were not very responsive, enthusiastic and vigorous during their full time work at the main employer. Some employers even complained of fatigue and loss of concentration on the part of employees because of their extra work at some other press during the off-work hours.

7.24 Labour Turnover

Labour turnover is one more problem which this industry faces to a great extent. It is a quantitative measurement of labour unstability. It is the rate of change in the working staff per unit of time. "It is measured in terms of labour accession and labour separation. Accession is defined as the total number of workers added to the employment during the period, new reemployed or transferred from other employments included. The separation implies severance of employment at the instance of workers or employers. This also includes termination due to death or retirement."¹⁰ The

accession rate is measured by the formula :

$$\frac{\text{No. of newly appointed persons}}{\text{Total No. of workers}} \times 100$$

The separation rate is similarly measured by the formula :

$$\frac{\text{No. of persons leaving the job or terminated}}{\text{Total No. of workers}} \times 100$$

These two rates - accession rate and separation rate together give the estimate of labour turnover. If both the rates are equal, that suggests that the number of labourers left equal the number of labourers joined. That leaves the total number of workers unchanged, but the exit and entry of workers have taken place. Obviously if the accession rate exceeds the separation rate, there is the nett addition of workers. And if the separation rate exceeds the accession rate, the nett reduction in the number of workers is introduced. It is not true to maintain that accession and separation rates are always equal.

A higher labour turnover puts the firm into disadvantageous position. In the days of boom and depression the labour turnover is high or low. Some degree of difficulty in identifying precisely and accurately the labour turnover is always felt. Because seasonal variation in the number of workers employed need not be confused with labour

turnover. Changes in the substitute or temporary workers always take place but that again need not be taken as labour turnover. Many times, even the absenteeism is taken as the turnover but that is not true. Absenteeism is unauthorized absence from job while the turnover involves some workers leaving the job and some joining. The firm faces the problem of getting used to the constantly changing staff, the staff members do not settle properly and concentrate and it finally affects the productivity of workers. Total output gets affected in turn and resources remain unutilized.

The Table 7.34 records the rate of labour turnover as noticed during the survey undertaken. The concepts of accession rates and separation rates were explained to respondents and care was taken to impress upon them that these rates were not to be mixed with the absenteeism or seasonal changes only. The presses were asked to also narrate the cause of the newly joined workers and the workers leaving jobs. The analysis helped to finally measure the extent of labour turnover.

As the Table shows, 8 printing presses said they had accession and separation rates between 80 and 100 per cent during the preceding year. As noted earlier, the rates need not balance, and some respondents might be having one rate exceeding the other or vice versa. What is significant to note is the rates falling in which percentage range. High

Table 7.34 : Extent of Labour Turnover

Accession and separation rates between	No. of presses reporting
80 to 100%	8 (15.09)
61 to 80%	10 (18.87)
41 to 60%	11 (20.76)
21 to 40%	9 (16.98)
20 or less than 20%	10 (18.87)
Zero	3 (15.66)
Not Reported	2 (3.77)
Total :	53 (100.00)

rates make the labour situation too fluid, the working staff changing in big numbers and the firm is in the grip of instability. Ten presses revealed their labour turnover between 60 and 80 per cent. Eleven presses (20.76 per cent of the total sample of 53 and the biggest group from the sample) had their labour turnover between 41 and 60 per cent. Nine presses had it between 21 and 40 per cent. Another 10 presses had it to be 20 per cent or less than 20 per cent. Three presses had it to be zero and 2 presses did not report on this point. The arithmetic mean of the entire sample works out to be 44 per cent.

The Table 7.35 presents the causes as revealed by the responding printing presses about the labour turnover

Table 7.35 : Causes of Labour Turnover

	No. of printing presses reporting	
1. Search for higher wages	6	(11.32)
2. Lack of job satisfaction	2	(3.77)
3. Poor facilities at work	3	(5.66)
4. Big presses siphon off workers with more attractive wages and conditions	9	(16.98)
5. Search for stable jobs	15	(28.31)
6. Cannot specify	5	(9.43)
7. Combination of 1, 4 and 5	12	(22.64)
8. Not replied	1	(1.89)
Total :	53	(100.00)

experienced by them. As already made clear, the high separation rate naturally leads to high accession rates and therefore this inquiry boiled down to the inquiry as to why there was a high separation rate. As noted before, high accession rates of boom periods have been kept away from this inquiry. The respondents were cautious and in cases even reluctant to part with that information and therefore along with the question from the schedule, informal discussions only pinpointed some of the causes of the labour turnover as revealed by the respondents. Six presses accepted

the fact that their workers left them in search of higher wages than they were paying. Therefore, continuously the process of exit from the muster and entry into the muster continued. Two presses admitted their workers went to some other press after leaving them because they could not derive job satisfaction from their job. Three presses from the sample admitted that the poor facilities at work made the workers desert them and thus high separation rate, consequently leading to a high accession rate. Nine presses complained that big presses attract the present workers with higher wages and other conditions. It has been established by now that in Pune there are some printing presses providing comfortable pay, stability and non-wage benefits too. On the other hand, there are small printing presses which guarantee none of these things. Fifteen presses (28.31 per cent of the sample, and this is the biggest group from the sample) felt that their workers left them because they wanted a stable job and it is pertinent to note that most of the respondents making this statement were small printing presses. Workers felt that a small press did not give them a long term stability in their job. Twelve presses preferred to reveal the combination of the statements Nos. 1, 2 and 5 as the cause of labour turnover. This also confirms the workers' attitude towards stability - alongwith higher wages overrule any other attitude while remaining loyal to

an employer. Five respondents agreed they had experienced labour turnover as noted in the preceding Table but they could not come out with any specific cause of it. One respondent did not reply.

7.25 Promotion

Another incentive to retain workers in the present employment and to work hard is the possibility of promotion in the job. A promotion is taken as an achievement and it is a means of recognition of the workers' long service and merit while doing his job. A compositor might become a foreman, or a printer might become a head printer or a supervisor, etc. A good promotion system is an insurance against workers leaving the current job in search of a press where promotions are easy. Obviously, in the case of many small presses, the query was ruled out as they ran the press with just one or two workers. But they were requested to reveal their preference in case the situation occurs in future. For some of them it was only an exercise in imagining such a situation.

The Table 7.36 drives home one fact that not many presses take this aspect seriously. Ten presses did not choose to make any revelation as they drew blank as far as the responses were concerned. Twelve from the sample did not think of any process of promotion of their workers. Ten presses did allow promotions but had no fixed method

Table 7.36 : "How do you allow promotion of Workers?"

	No. of Printing presses reporting	
1. On seniority	9	(16.98)
2. On merit	5	(9.43)
3. On recruitment from outside	7	(13.21)
4. No fixed method followed	10	(18.87)
5. Not thought of workers' promotion	12	(22.64)
6. Not responded	10	(18.87)
	Total :	53 (100.00)

of promotion. This kept the promotion system ad hoc and subjective. Thus 22 printing presses from the sample (41.51 per cent of the total) were out of bounds for this query. Ten were ad hoc and subjective in their approach. The remaining 21 presses (39.62 per cent from the sample) had some method of promotion followed in their presses. Nine presses reported that they allowed promotions strictly on seniority. Five presses from the sample followed promotion procedure based on merit only. Seven presses from the total of 53 presses (13.21 per cent of the total) said that they recruited the specialized staff on higher posts of promotion by obtaining them from outside. Ten presses from the

sample (18.87 per cent of the total) did not follow any fixed method for promotions. Either they used the combinations of the three methods noted above or some other method is resorted to. A certain method emphasizes only a certain aspect. For example, promotion on seniority in some cases would be at the cost of quality and merit. On the other hand, promotion on merit would do injustice to some who are senior and have put in long service. If for reasons of quality and efficiency a worker is recruited on a higher post from outside, rather than internal promotion, the quality and output would be taken care of but the staff already working would feel sidetracked and superseded. Since only a small number of presses have some regular method of promotion, it would be too hasty to generalise on this point but one conclusion is inescapable that the promotion system has not received due attention on the part of presses. Allowing regular promotions is one of the incentives to workers and also an instrument to guarantee quality and productivity but majority of the presses from the sample drew blank on this front.

7.26 Other Benefits

Non cash benefits which a firm allows to its staff is another way of allowing higher real wages to the staff and thus is a means to jack up morale of workers, thus to ensure integrity and efficiency of workers. But here again the

situation is not as satisfactory as can be imagined. Reference may be made to the Table 7.37 below. In total 18 presses (32.97 per cent of the total) provide no benefits or they have not reported. Thus about the third part of the respondents is out of question. Out of the remaining, 7 presses (13.21 per cent of the total) provide uniform to its workers. Transport is provided by none of the respondents. Twenty presses (37.73 per cent of the sample) provide free tea or coffee to its workers twice a day. Two printing presses arrange a recreation trip once a year. Another 5 presses provide other miscellaneous non-cash benefits to their staff. The workers from the presses are not fortunate enough to enjoy a variety of non-cash benefits. This partly is due to the low bargaining power which workers in the

Table 7.37 : Non-cash Benefits provided by the Printing Press to the Employees

	No. of Printing presses reporting	
1. Uniform	7	(13.21)
2. Transport	-	
3. Subsidized canteen	1	(1.89)
4. Free tea or any other item	20	(37.73)
5. Annual trip	2	(3.77)
6. Other than noted above	5	(9.43)
7. None	16	(30.20)
8. Not reported	2	(3.77)
Total :	53	(100.00)

printing industry hold and partly lack of understanding on the part of employers that this benefit is important to motivate workers for more work.

7.27 Payment by Results

The incentive system of wages is one more method of attempting a higher cash benefit for better performance put in by an employee. Not only incentive wages could be arranged for more quantitative output, but it could also arrange for better quality product, which is the crux of the printing activity. The main preconditions for the success of this system of wage payments is that it must be made known to all, an equal opportunity be provided to all for making a faithful try under the system, and the quantification of the extra - and better work to be linked to wages should be as clear as possible. It should act as a means of motivating others to put in extra work and it should reward those who really do so. But the system at the same time should not show any type of discrimination among workers by which it would simply create counter action.¹¹

But here again the printing industry in Pune city has failed to take up to this system of 'payment by results'. Out of the total sample, as noted in Table 7.38, 35 presses do not follow any formal system of incentives for their workers. The inquiry was kept limited to the regular time rate workers and the contract workers and piece rate

workers (which number 28.12 per cent of the total, refer to Table 7.13 above) have been kept out of the purview of this inquiry. Two presses did not report. Thus, 37 presses (69.81 per cent of the total) have been away from this type of inquiry. Out of the remaining, 3 presses follow the incentive payment system for more production. Only one

Table 7.38 : Incentive System of Wages

Type of Incentive System Used	No. of Responding Printing Presses
1. Incentive Payment for more production	3 (5.66)
2. Incentive payment for better quality production	1 (1.89)
3. Incentive for regular attendance	9 (16.98)
4. Incentive of any other type	3 (5.66)
5. No use of the system	35 (66.04)
6. Not reported	2 (3.77)
Total :	53 (100.00)

press has devised a system of making special payment for better quality work. This was the case of an art printer in the city who insists on quality and minute colour combinations, perfect registration, etc. Nine presses (16.98 per cent of the total sample) have an incentive for regular attendance. This is a right step to reduce absenteeism.

Three presses have devised some other systems of making incentive payments to their employees.

While discussing this point with the respondents, there was a feeling of ignorance of the system, which was widespread. But at the same time, many of the respondents wanted to know about this system, they were curious and eager to introduce some sort of this system. A few feared this system benefits only a handful of workers and as such would spread the feeling of discrimination among the staff. But on the whole, it is one management innovation which needs to be taken up by the presses.

7.28 Bonus

The last inquiry about the employer-employee relation dealt with the nature of bonus paid by the press. (Refer to Table 7.39.) Out of the sample, 2 presses did not report

Table 7.39 : Nature of Bonus Paid

Bonus Item	No. of responding printing presses
1. Statutory Bonus	28 (52.83)
2. Incentive Bonus	4 (7.55)
3. Profit linked Bonus	3 (5.66)
4. Ad hoc Bonus	5 (9.43)
5. Bonus of unspecified nature	4 (7.55)
6. Presses not paying any bonus at all	2 (3.77)
Total :	53 (100.00)

and 7 presses admitted that they did not make any bonus payment at all. Thus, 9 presses (16.98 per cent of the total) have been out of the scope of this inquiry. Forty four presses pay bonus of this or that type to their workers. Twenty eight respondents pay the statutory bonus of one month's salary extra during the year, i.e., 8.33 per cent annual bonus. Four presses pay the incentive bonus, three presses pay the profit linked bonus, 5 presses have some ad hoc type of bonus, i.e., they do not have any established bonus system followed. There were still 4 presses which paid bonus to their workers but could not specify its nature.

7.29

ECONOMIC PERFORMANCE AND RETURN
ON INVESTMENT, i.e., PROFIT

The series of Tables outlined hereafter deal with the performance of the printing firms under review. The firms sampled out from the city of Pune carry out various types of business which is broadly termed as "printing". As far as the end product is concerned, some firms give out only composing service, some composing and printing of letter press type, some carry on the offset printing process, etc. They employ varying number of workers. They represent a wide range of productive capital invested per unit. They also carry on different business practices. Due to all this,

their performances show a wide variety, and it is rather difficult to identify common features about their performances. Each and every respondent from the sample showed different types of responses to the queries from the schedule and on this count too, the comparisons among the firms from the sample have some limitations. Taking these points into consideration, an attempt was made to collect data about their performances and the Table which follow generalise about these performances.

The Table 7.40 portrays the manner in which the productive capital has been added up in the case of responding units from the sample. It has been made clear in the Table that the total productive capital used by each firm is made up of 4 components: it includes land and building, machinery, spare parts, etc., office furniture and consumable items in the form of working capital such as paper, ink, lubricating oil, kerosene, chemicals, cash in hand, amount receivable, etc. All these items have shown two types of values : The one by book value and the other by market value. The former adjusts the value each year after deducting depreciation by the standard rate. For instance, the printing presses adopted different rates of depreciation on different items used in printing industry. The standard followed by the British printing industry, as given out by

Table 7.40 : Components of Productive Capital

Category	Item	By Book Value	By Market Value
A	A-1 Land		
	A-2 Building		
B	B-1 Machinery of all types		
	B-2 Spares, tools and accessories		
	B-3 Type, Cases, etc.		
C	Office furniture		
D	Working capital consisting of paper of all types, ink, lubricating oil, kerosene, chemicals, cash value added of the finished product, Amounts receivables, cash in hand, etc.		
Total Productive Capital (A + B + C + D)			

the British Federation of Master Printers was¹²:

- 1) Type : 12.5% annually
- 2) Plant and Machinery : 10% annually
- 3) Fixtures and Fitting : 6.25% annually
- 4) Building : 2% annually

The other set of data noted the figures as per the market rates prevailing at the time of collecting data.

The next two Tables, Tables 7.41 and 7.42 present the frequency distribution of printing presses from the sample, firstly as per the book value and secondly as per the current market value of the items forming the part of the total productive capital. As per the Table according to the market value of the productive capital, an inverted pyramid-type distribution of the printing presses from the sample is seen. Total productive capital upto Rs. 1 lakh has been invested and utilized by as many as 15 presses from the sample, i.e., about 28.30 per cent from the sample. At the top of this pyramid is the occurrence of 5 presses which have their productive capital in use exceeding Rs. 5 lakhs.

As per the book value, the same situation shows the different picture. Depending on the life and nature of the capital in use, and also depending on different rates of depreciation on different items, the situation presented in the Table is somewhat different from the previous Table. Also it was observed that different firms from the sample follow different methods and rates of calculating depreciation and thus picture presented in the Table is different that the previous one. Table 7.42 shows that as per the book value, 18 printing presses have fallen in the category of productive

Table 7.41 : Distribution of Printing Presses as per
Total Productive Capital Employed
(Categories as per market values)

Category of Productive Capital	No. of printing presses
1. Upto Rs. 1 lakh	15 (28.30)
2. Rs. 1 lakh to 2 lakhs	17 (32.08)
3. Rs. 2 lakhs to 3 lakhs	7 (13.21)
4. Rs. 3 lakhs to 4 lakhs	5 (9.43)
5. Rs. 4 lakhs to 5 lakhs	4 (7.55)
6. More than Rs. 5 lakhs	5 (9.43)
Total :	53 (100.00)

Table 7.42 : Distribution of Printing Press as per
total productive Capital Employed
(categories as per book value)

Category	No. of printing presses
1. Upto Rs. 1 lakh	18 (33.97)
2. Rs. 1 lakh to 2 lakhs	16 (30.19)
3. Rs. 2 lakhs to 3 lakhs	6 (11.32)
4. Rs. 3 lakhs to 4 lakhs	5 (9.43)
5. Rs. 4 lakhs to 5 lakhs	3 (5.66)
6. Rs. 5 lakhs and above	5 (9.43)
Total :	53 (100.00)

capital upto Rs. 1 lakh only. Other categories of productive capital as per their book value have been shown in the same Table.

The next attempt is to present break up of annual turnover of printing presses under survey. For the same, through the questionnaire, the respondents were requested to furnish figures, in rupee amounts, of the average of the last three years, of various items of expenditure, after deducting taxes. In the case of each responding printing firm, this figure was recalculated into percentages. These percentages have been averaged out and presented in the subsequent Tables. But before looking into the itemwise expenditure, some clarification about the statistics of turnover need be given.

Different printing presses follow different methods while calculations of their costs and prices are done. The cost of paper is an important item about which it is observed that no standard practice is followed in this industry. Printing job undertaken for providing printing service only and paper to be provided by the client is one type of business practice. Since sale of paper requires sales tax to be recovered and paid to the government and sales tax registration number to be obtained and periodical returns to be filed, many presses avoid inclusion of cost of paper in their cost and price calculations. But since, printing presses, showing their turnover upto Rs. 50,000 only

are exempted from paying sales tax, they are not particular about separating their printing service charges and paper charges. But other printing presses insist that the paper be supplied by client only and the press would provide only printing service.

The printing presses while recording the data were asked to exclude cost of paper from their calculation of annual turnover, but it was not always possible to get accurate data precisely as per the requirement of the present purpose. Many printing presses had a practice of floating another firm, at the same address, under different title but invariably under the same ownership and management to arrange for the sale of paper. That was merely an adjustment on paper. But that avoided inflating of turnover by inclusion of cost of paper. This facilitated the separation of printing account from the transactions of paper, but this is not a standard practice and therefore the data collected under this count is not strictly comparable.

On the other hand, some printing presses also show a tendency to include the cost of paper, visiting cards, wedding cards, invitation cards, etc., in their cost and pricing calculations because the sale of paper, according to those presses, allows a wider margin of profit than the printing service. Instances were quoted that the clients were charged a price of paper used about 25% to 30% more

than the price at which it was originally purchased.

Also some printing presses followed the mixed practice about the calculating cost of paper. As for the big jobs such as book printing, they received paper from the client but for small jobs they themselves provided paper. While collecting data, efforts were made to separate data of printing service only. But despite this, in some cases the reformulation of data had certain limitations. The situation narrated above is unique one and is because printing service is provided to each job separately. Each job has different specifications and production cannot be attempted in anticipation of demand and stocked. And each different job has different repercussions on the cost calculations too. Printing the same text on a normal white printing paper shall be an easy and quick job. But printing the same text on art paper involves more time on proofing, longer make ready time but at the same time consumes less ink. Thus cost and price calculations of each job is a separate matter and press managers have to follow all these practices very scrupulously.

As noted earlier, the Table 7.43 notes the net annual turnover at the market price after deducting sales tax. The figure revealed by printing presses has been averaged out over the last three years. The impact of general price rise during the last three years has been eliminated by deflating

Table 7.43 : Net Annual Turnover of Printing Presses

Category	No. of Printing presses reporting
1. Rs. 2 lakhs or below	25 (47.16)
2. Between Rs. 2 lakhs and 4 lakhs	12 (22.64)
3. Between Rs. 4 lakhs and Rs. 6 lakhs	6 (11.32)
4. Between Rs. 6 lakhs and Rs. 8 lakhs	4 (7.55)
5. Above Rs. 8 lakhs	6 (11.33)
Total :	53 (100.00)

the current year figures to the base of the first year. Various categories of annual turnover upto Rs. 2 lakhs, between Rs. 2 lakhs and 4 lakhs, etc. An inverted pyramid type frequency distribution of printing presses has been reported, i.e., 25 printing presses reported their turnover to be upto Rs. 2 lakhs per year. The highest category being turnover above Rs. 8 lakhs wherein 6 firms from the sample are reported.

The next three Tables (Nos. 7.44, 7.45 and 7.46) present the picture about percentagewise break up of the annual turnover of the printing presses sampled out. The limitations of this attempt are obvious. As already noted earlier, all the firms do not follow a standardized method of accounting and therefore generalizations need be taken

Table 7.44 : Firms with net annual turnover of Rs. 4 lakhs or less (37 printing presses) (Percentagewise break-up of their total revenue)

1. Paper, raw material and electricity	54.76
2. Wages and salaries	21.75
3. Transport and Maintenance	0.85
4. Postage, Telephone, Office expenses and insurance	0.70
5. Interest, depreciation, legal expenses, rent, reserves, contingencies	2.55
6. Miscellaneous items	2.54
7. Profit	16.85
Total :	100.00

Table 7.45 : Firms with annual net turnover between Rs. 4,00,001 and Rs. 8,00,000 (10 firms) (Percentagewise break-up of their total revenue)

1. Paper, raw material and electricity	45.39
2. Wages and Salaries	25.96
3. Transport and Maintenance	1.35
4. Postage, Telephone, Office expenses and Insurance	1.65
5. Interest, depreciation, legal expenses, rent, reserves, contingencies	7.45
6. Miscellaneous items	1.15
7. Profit	17.05
Total :	100.00

Table 7.46 : Firms with annual net turnover of
Rs.8,00,001 and above (6 firms)
(Percentagewise break up of total revenue)

1. Paper, raw material and electricity	35.95
2. Wages, Salaries, P.F., ESI, Gratuity, Bonus, Labour welfare, a/c. etc.	30.05
3. Transport and Maintenance	1.95
4. Postage, Telephone, Office expenses, and Insurance, Factory expenses	1.73
5. Interest, depreciation, legal expenses	8.87
6. Advertisement, Audit fees, travelling expenses, Directors' Honorarium, etc.	1.50
7. Miscellaneous items	4.00
8. Profit	15.95
Total :	100.00

with caution. Especially in the case of small firms, their figures about expenditure, turnover, etc., keep a certain margin of error which is due to some type of adhocism. It is for this reason that the comparisons between the small firms showing low turnover and large firms can not be stretched too far to arrive at generalization. But certainly some trends can be read out from the tables noted here.

In the case of the first category of comparatively smaller firms more than half, i.e., to be precise, 54.76

per cent of their total receipts are claimed on items such as raw material (including ink, type, kerosene, film, etc.) paper (for jobs and also for packing, inter leaving etc.) and electricity. Thirty seven firms fall in this category and the percentage share of each of them was taken together to calculate the average of 54.76 per cent being claimed by this item. If Tables 7.44 and 7.46 are read together to compare the share of this item by 10 firms of medium size from the turnover figures and 6 firms belonging to the big size from the turnover figures, a trend of falling percentage share on paper and raw material and electricity is observed as the turnover of a firm grows. As the figures reveal, this percentage share goes on diminishing from 54.76 per cent to 45.39 per cent when the category of turnover between Rs. 4,00,001 and 8 lakhs. is taken. The same percentage share further falls to 35.95 per cent when a still higher turnover of Rs. 8,00,001 and onwards is taken. Eventhough limitations of present study are accepted, one conclusion cannot be missed and that is : along with the increase in volume of turnover of the printing presses, the percentage share on raw material items is diminishing, i.e., they change in the opposite directions.

But precisely opposite is the case of the item of wages and salaries. Along with the expansion in turnover, its percentage share is increasing as is revealed in the

Tables noted here, it has gone up from 21.75 per cent to 25.96 per cent and further to 30.05 per cent. One can make a similar reading as far as the item like (a) expenditure on transport and maintenance, (b) postage, telephone, office expenses and insurance and (c) interest, depreciation, legal expenses, rent, contingency, etc. Larger volume of business, legal expenses on matters concerning labour problems, import of machinery, auditors' fee, etc., maintenance of sophisticated equipment like offset machines, photo-composing units, etc., all need growing expenses and hence their percentage share grows more than proportionately in the case of the printing firms under study. The item such as advertisements, audit fees, travelling expenses do not find any place in the low sized and medium sized firms represented in the Tables above. Thus, the 'administration' of the growing business claims steadily growing part of the total receipts from business. Better accounting methods and better classification of total expenditure also plays its part wherein increasing percentage share is observed.

The last item in the Tables 7.44, 7.45 and 7.46 is the nett profit accrued to the firms falling in the category of respective turnover groups. The small firms group of turnover upto Rs. 4 lakhs, on an average, earn the profit of 16.85 per cent. But the figures from the questionnaires filled in by the respondents reveal a wide range of profits

earned ranging from 4 per cent to 20 per cent. In the case of the second category of turnover ranging from Rs. 4,00,001 to Rs. 8,00,000, the profit rate slightly improved to 17.05 per cent. In the case of the category of firms having the biggest turnover out of the sample, the profit rate averages out to be 15.95 per cent. Even though the share of expenditure on raw material falls, the same on other items increases keeping profit rate more or less the same in all the categories.

If an average of the firms from all the three categories is considered, the profit rate works out to be a simple average of 16.62 per cent per annum. It is also proved within the limitations of the present study, that the size of the firm and rate of profit earned do not necessarily have any correlation. Expanding turnover and size is not always accompanied by higher profit rate because of inflating items like No. 6 from the Table 7.46 above.

BUSINESS PERFORMANCE

7.30 Banking Habits

The Table 7.47 shows the banking habits disclosed by the respondents. They were asked as to how many bank accounts they maintained. As the Table shows, only one printing press reported of not maintaining any bank account

Table 7.47 : Banking Habits

No. of Bank accounts maintained	No. of printing presses reporting
1. 1 bank account only	21 (39.62)
2. 2 bank accounts	22 (41.51)
3. More than 2 bank accounts	9 (16.98)
4. No bank account kept	1 (1.89)
Total :	53 (100.00)

for the purpose of business. All the remaining, i.e., 52 printing presses maintained one or more than one bank accounts for purpose of their business activity. When the data was collected for this purpose, the loan accounts in banks such as cash credit or overdrafts were not included. Twenty one printing presses, i.e., 39.62 per cent of the total sample maintained one bank account with commercial or co-operative bank. Twenty two of the sample (41.51 per cent of the total) maintained two bank accounts for business purpose, while nine printing presses maintained more than 2 bank accounts. Thus in total 31 presses needed two or more bank accounts for conducting their routine business.

Obviously the question arises as to why the firms need to keep more than one bank accounts, because we have 31 presses, i.e., 58.49 per cent from the total who have

reported to be keeping more than one bank accounts. These responses have been presented in Table 7.48. Five presses said they required more than one bank accounts to cope up with bigger volume of transactions taking place. Eight printing presses kept bank accounts at more than one banks because they hoped to get loan facility from either or all of them. While sanctioning the cash credit or overdraft limit, the banks are particular if the firm has satisfactorily maintained an account with them for some time. Banks even suggest that all types of business be channelized

Table 7.48 :- Reasons for maintaining more than one bank accounts

Reason	No. of printing presses reporting
1. Needed for bigger volume of transactions	5 (16.13)
2. Possibility of loan facility from either or all of them	8 (25.81)
3. Possibility of getting printing job orders from any or all of them	10 (32.25)
4. Needed for meeting some special types of needs such as Government job orders or outstation business, etc.	5 (16.13)
5. Extra facilities and arrangements allowed by different banks	3 (9.68)
Total :	31 (100.00)

through their bank only. A slightly bigger number of presses, i.e., 10 from the sample kept bank accounts at several places in the hope of getting printing job orders from them. Banks need a lot of printing service to get their challans, vouchers, forms, receipts, cheques, account books printed and bound and thus the firm which is an account holder of some standing has higher chances of being favoured with the printing order.

For some presses, multiple bank accounts was a necessity. For example, the nationalized banks have a larger network of branches than the banks of local nature, i.e., the co-operative banks. Getting remittances from outstation or making payments outside is easier, quicker and cheaper if an account is kept with a nationalized bank. The presses feel that fulfilment of printing order is easier if a certificate of standing is issued by the State Bank of India because most of the government business is handled by the State Bank of India.

Three presses reported that they kept extra bank accounts because some banks allowed extra facilities to them, i.e., quick credit to the cheques submitted for realization, cheaper draft facility, or lower charges for clearing cheques, etc. Of course, the discussions while recording this reason confirmed that personal acquaintance was more responsible for this extra favour rather than any business practice.

7.31 Nature of Business

The next inquiry wanted the respondents to precisely record what type of printing jobs they undertook. The same has been exhibited in the Table 7.49. Seventeen presses undertook only commercial printing. This involved printing of leaflets, letterheads, visiting cards, invoices, credit notes, circulars, handouts, etc. In total 13 printing presses specialized in general book printing and technical book printing. This proportion is 24.55 per cent of the total sample. Two presses specialized in magazines and weeklies. Three presses undertook the job of exercise books and account books. Seven presses accepted the work of commercial printing along with Souvenirs and annual reports. Four presses reported that they undertook any kind of job noted in the Table, suggesting that they did not specialize in any but had the capacity to undertake any kind of job. The conclusions which can be drawn from the Table referred to above are obvious. The majority of presses in the city still resort to commercial printing, categories Nos. 1, 6, 7 and 8 noted above are the pure commercial printers, and they number up about 31 out of 53 printing presses, i.e., about 58.5 per cent of the total. Even though commercial printing has been a recent development in the industry, the extent of diversification is still narrow and imperfect.

Table 7.49 : Nature of Production brought out by
Printing Presses

	No. of presses under- taking the jobs	
1. Commercial printing only	17	(32.08)
2. Book work, General	3	(5.66)
3. Bookwork, Technical	4	(7.55)
4. Magazines, weeklies, etc.	2	(3.77)
5. Exercise and account books	3	(5.66)
6. Souvenirs, Annual Reports	5	(9.43)
7. Miscellaneous	2	(3.77)
8. No. 1, 6, 7 from above	7	(13.21)
9. No. 2 and 3 above	6	(11.32)
10. All of them	4	(7.55)
Total :	53	(100.00)

The languagewise outturn of the printing work of all the presses reflects the nature of the clientele which the industry has to serve. The Table 7.50 shows about 53 per cent of the total work in Marathi language. But spread of commercial work and other promotional literature has resulted into a high percentage of 40 per cent for jobs in English language. The remaining 7 per cent of the jobs are from Hindi, Urdu, Sindhi, Kannada languages.

Table 7.50 : Languagewise outturn of the printing work of all the Presses

Language	Percentage
English	40
Marathi	53
Hindi	5
Urdu	1
Sindhi, Kannada, etc.	1
Total :	100

7.32 Change in Demand

While checking data about the nature of output brought out by presses in Pune, it was seen that the output in majority was of commercial jobbing nature. But the respondents were also asked to state whether they themselves perceive any change in the pattern of demand for the printed product in the preceding five years' time. This inquiry was significant because the changes in the demand pattern take place gradually but certainly at the grass root level only, and the firms operating in the field would be first to record these changes and react accordingly. There were two parts of this query. Firstly, the respondents were asked to state whether they perceived any change to have taken place or not. Those who responded in the affirmative

were requested to specify the nature of change. The responses have been recorded in the Table 7.51.

Table 7.51 : Nature of change in the market for Printed Products During the last 5 Years

Response	No. of Reporting Printing Presses
1. Firms reporting no change taken place	34 (64.15)
2. Firms reporting some change to have taken place :	18 (33.96)
a. Increase in the offset printing	3
b. Increase in multi-colour Art printing	4
c. Increase in the commercial printing	7
d. Increase in Marathi language printing	2
e. Decline of book printing	2
3. Not reported	1 (1.89)
Total :	53 (100.00)

One firm from the sample of 53 did not register any response. Thirty four (64.15 per cent of the total sample) saw no change taking place in the market which they served. The remaining 18 presses (33.96 per cent of the total) certainly sensed the changing direction of winds blowing in

the market. While specifying the new development round the corner, the change towards specialization in commercial printing was recorded by 7 respondents. This is in conformity with the change already taking place in the industry. Four presses made it clear that their business of colour printing and art printing increased in the recent past. Three presses saw a transition from the traditional letterpress printing to the offset printing, testifying further that the latter offers a better quality of the printed product, makes a wider range of colour printing possible and makes printing speedier than before. Two presses stated that they marked a definite increase in the Marathi language printing among their clients. The remaining two presses were sure about seeing the decline of book printing jobs from the clients. These are mere observations of the presses under study. They are minor in number, but indicative of the changes taking place in the demand pattern.

While discussing about this type of development taking place within the industry, it was observed that the smaller sized firms were unanimous in reporting about absence of any type of change. This was probably because the small size printing firms found it rather difficult to accept the changes and innovations as demanded by the new trends in the market. In turn it was partly because for small sized firms, it required huge investments to introduce new technological

changes and innovations. Initially, it is always the reluctance marked in the case of firms while making any type of change. Firms, it is observed are generally cautious before any major change is introduced by them.

7.33 Specialization and Monopoly

Next inquiry went into the causes of specialization pursued by the printing presses. The printing industry produces quite a wide range of printed products. It ranges from small jobs like visiting cards or letter heads to complicated jobs like art printing or book printing. It was observed during the survey that some firms from the sample did not reveal any type of specialization as such and they tried to cater for any job which would come to their doorsteps. For the sake of this inquiry, by specialisation, it was meant that firms take up about 70 per cent or larger number of jobs of that particular nature. Thirty two printing presses from the sample as reported in Table 7.52 (60.38 per cent of the total) stated that they did not specialise in any particular type of job. The rest of the presses, i.e., 21 presses from the sample (39.62 per cent of the total) reported that they did specialise in any one type of the printing service. When firms were asked to state as to what made them specialise in a certain printed product, the firms gave various factors which led to specialisation. Six firms reported that long experience of a particular type

of job made them specialise in a certain type. Four respondents said that they specialised in a particular job because they had a special liking of that job. Six respondents revealed that they had acquired special training and knowledge of that type of job. This involved the training of screen printing, colour printing, art printing, offset printing, etc. Three respondents from the sample emphasized that they had the specialized machinery available

Table 7.52 : Factors leading to specialization in trade

Factors	No. of Presses reporting	
1. Firms <u>not</u> specialising in any type of printed product	32	(60.38)
2. Firms specialising in some type of the printed product or the other, due to -		
a. long experience of that particular job	6	(11.32)
b. Special liking of that type of job	4	(7.55)
c. Training and knowledge	6	(11.32)
d. Specialized machinery available	3	(5.66)
e. Satisfaction it gives to the owner	2	(3.77)
Total	53	(100.00)

with them and that enabled them to resort to specialisation. This included the machinery for embossed printing, machinery for security printing such as cheques, or computer stationery, etc. Two of the respondents did not have any economic, commercial or technical ground for specialisation, but they said that it was the job satisfaction which led them to specialise in a certain type of printed job. Thus, as the Table 7.52 reveals, training, knowledge and machinery were more dominant factors in enabling printing presses to specialise. The market for printed product is a very wide one and also a varied one, and the firms had their own choice as to what type of specialization they would resort to.

A logical extension of the above inquiry was to check as to whether the firm is holding any degree of monopoly in the market. More minute and consistent specialisation in providing a certain printed product to the market would certainly give the firm an opportunity to gain monopoly power. By monopoly it is hereby suggested that the firm has no close competitors for a particular product and the firm is in a position to claim a very high share in the total demand for that particular type of job. On enquiry, it was found that 10 presses (18.87 per cent of the total) were positive in maintaining that they held monopoly position as for their particular type of job. Thirty two firms (60.38

per cent of the total) agreed that they did not hold any monopoly power. Seven firms were undecided about their monopoly position and 4 firms did not respond. This data has been presented in Table 7.53.

Table 7.53 : Response to the query Whether the Firm Holds Monopoly of Some Nature

Response	No. of Presses reporting
1. Yes	10 (18.87)
2. No	32 (60.38)
3. Undecided	7 (13.21)
4. Did not report	4 (7.54)
Total :	53 (100.00)

7.34 Objectives of the Firm

An inquiry into objectives of firms conveys very significant information about the operations and performance of a firm. It shows the direction where the firm is heading to. A firm may seek to meet one goal or more than one goals simultaneously. So also, a firm may try to meet the same objectives both in the short run as well as in the long run. In some cases the objectives in the short and long run would be different. 'To earn maximum profit' has been an objective which was traditionally accepted by theoreticians till 1930's.

The work of Mrs. Joan Robinson and Edward Chamberlin during early 1930's paved the way for departure from the traditional theory of the firm which believed in perfect competition. The contribution of these two economists identified the imperfect competition or monopolistic competition as an independent market form. Their analysis achieved a high degree of theoretical refinements, including the incorporation of selling costs and product as a variable. The next decade witnessed the perfection of oligopoly models where again it was presumed largely that the firms were interested in maximising their profits. Especially after the second world war, the profit maximisation objective among the traditional theory of the firm is criticised extensively.

Several arguments were preponded to show the dissatisfaction towards the traditional theory. It was argued recently¹³ that the foundation of the traditional theory was slowly and certainly giving way. For instance, Curwen argued¹⁴ that the traditional theoretical model worked on the assumption of perfect knowledge prevailing in markets. He also points out that the post war development of separation of ownership from control has largely nullified the traditional theory of the firm. The empirical evidence, which is available in abundance,¹⁵ shows that the firms hardly follow the behaviour which the theory portrays. One such phenomenon is the occurrence of L-shaped average cost

curves in practice¹⁶ as against the U-shaped average cost curves presumed by the traditional cost analysis.

Another noteworthy development is observed in the field of the objectives of firms. Hall and Hitch kept the ball rolling in this field of microeconomics in 1939 when they published an article under the title - Price Theory and Business Behaviour.¹⁷ They asserted that the firms are reported to be following the full-cost pricing practices rather than the marginal cost pricing behaviour. Managerial and behavioural theories of firms further deviated from the traditional theory. The 1950's and 1960's also witnessed the new theories of firms gradually gathering ground, these theories put forward several objectives of firms, sometimes complementary but sometimes contradictory to each other. For example, the satisfactory profit, rather than maximum profit was the goal of several firms, it was asserted. Managerial utility maximization between work and leisure was another goal tried out by several firms. Firms highlighting growth as their objectives as against maximum profits were also observed by some theoreticians. Even a biological interpretation in terms of the genesis, growth, maturity, breeding and eventual death of a firm was also theorized.¹⁸

On this background, it was thought appropriate to inquire into the objectives which the printing firms under survey sought. While it was obvious that the firms do not

follow only one objective but several objectives simultaneously. Different firms function under different risk conditions, under varied cost conditions, different firms seeking different objectives. The firms under survey were given an assortment of possible objectives which they seek and they were asked to put the given objectives in their priority order. The objectives and the total ranking such as the first, second or third which each one has received has been presented in Table 7.54.

It is evident from the Table that the objective 'to get steady income' has received the first priority option by as many as 15 firms from the total and this objective has received first priority by a largest number of printing firms from the sample. The second weightage given by 11 firms was to maximise profits, the 'traditional' objective. It is evident that firms under our study are more interested in earning steady income rather than maximization of their profits. To maximise business, i.e., to earn highest turnover has been put as the first priority objective by 8 firms from the sample. Six firms feel that feeding workers and machines with work is their prime objective. Some other objectives which have received lower weightage as the first objective are P continuous expansion, survival, making improvements and giving quality product. Some objectives which have not received any weightage as the first priority

Table 7.54 : Objectives of the Printing Presses

Objective	No. of printing presses opting for it as their		
	First objective	Second objective	Third objective
1. Maximise profit	11	05	04
2. To get steady income	15	07	07
3. To maximise business	08	11	10
4. To feed workers and machines	06	06	05
5. To expand continuously	04	06	07
6. To introduce improvement	02	06	03
7. To meet monthly bank liability	-	05	03
8. To survive in business	04	03	05
9. To minimise cost of production	-	04	04
10. To give quality product	03	-	02
11. To seek job satisfaction	-	-	03
Total :	53	53	53

are : meeting monthly bank liability, or minimising cost of product or seeking job satisfaction.

Even though it is true that firms are largely interested in steady income or higher (but unsteady) income it is equally remarkable that some firms do not give first priority

to some typical objectives which are more appropriate to printing industry only. For instance, minimisation of cost of production is reckoned as a standard objective before the owners of firms, and especially in a keenly competitive industry like printing industry, to maintain the competitive position through cost minimization is very significant. But no firm from the sample has rated this to be its premier objective. This shows that the firms follow the traditional objectives of stability and profit maximisation and not the ones typical to this industry.

To seek job satisfaction is also a goal of some firms. To complete a job upto one's own satisfaction maintains, and even increases lively interest of an owner-manager in business, eventually that is the key to make further strides in quality improvement. This in turn is a key in printing industry. But this aspect has been totally neglected by the firms and we see no firms from the sample pursuing this goal.

To meet monthly bank liability also has not been the primary goal of any firms. This may be partly attributable to the fact that some of the firms might not have raised any bank loan and again some firms manage their loan repayment well, so that it never is a major problem to them.

Three firms from the sample have said that they give top priority to give quality product to their client. This shows the behaviour of a small minority of firms trying to

be quality conscious. Though this tendency has a very small incidence, it is significant for a printed product, where quality plays considerable role in retaining a client over a period of time.

As is made out in the Table noted above, the firms were asked to rank the given goals as per their priority. Various objectives have received different weightage as the second priority goal among the sampled printing presses. To maximise business turnover has been opted by as many as 11 printing presses, the largest number among the presses pursuing any single objective as their second priority. Seven printing firms have noted 'steady income' as their second priority while doing business. Six firms each have opted for the goals such as feeding workers and machines with work, attempt continuous expansion and to introduce improvements in business.

The firms also were asked to record the third priority of their goals. To maximise business turnover was opted by the firms as their third priority. Seven firms from the total each wanted to earn steady income and expand continuously as their third priority among business objectives.

Since firms were asked to rank all the objectives to be the first or the second or the third among the alternatives given, the objectives of (1) getting steady income and (2) maximising business turnover have received maximum

weightage of 29 each. The goal of profit maximisation is the next in the order, i.e., weightage of 20. To seek job satisfaction has received the lowest weightage of 3 only. With all this elaboration, there is room to believe that the firms are not exactly the profit maximisers, in the traditional sense of the term. On the one hand, they are the maximisers of their business turnover, probably because some firms equate the turnover with profit! Some firms feel that maximization of turnover is the key to more and maximum profits.

7.35 "Is Printing the only Activity?"

While the economic and business analysis of the printing firms was being analysed, the firms were asked whether they fully depended on the printing activity as such. It is observed many times that the firms, and especially small firms, take up various activities on the seasonal basis. During off season they resort to some other activity related or unrelated to the main business activity. Some firms take up varied activities not on the seasonal basis but on the regular basis. These activities include publishing, dealing in paper, stationery, wedding cards, invitation cards, printing ink, machine spare parts, etc. Table 7.55 reveals the position that 40 printing firms out of 53 fully depend on printing as their sole business activity and do not resort to any other business to support

or supplement their income. Ten firms (18.87 per cent from the total) said they do not fully depend on the printing activity and they partly supplement it with some other business. Three firms did not report. Out of the ten firms which pursue some side activity, 4 firms said that their supplementary activity was related to the printing activity,

Table 7.55 : "Is Printing the Only Activity?"

Do you fully depend on the present activity?	No. of presses reporting	
Yes .	40	(75.47)
No	10	(18.87)
Not reported	3	(5.66)
Total :	53	(100.00)

Table 7.56 : Analysis of firms pursuing side activities

	No. of presses reporting
1. Firms pursuing side activities related to the printing industry	4
2. Firms pursuing side activities unrelated to the printing industry	6
Total :	10

such as publishing or supplying stationery, etc. In the case of 6 firms, their supplementary activity was unrelated to the printing activity. The activity unrelated to printing allowed some possibility of spreading risk and overcoming the lean season loss of business. Activities unrelated to printing activity included running a pharmaceutical store, and a shoe store. One of the 6 respondents from this category is a full time teacher in a local school.

The Table 7.57 is eloquent in analysing the causes of resorting to some side activity or supplementary activity pursued by 10 printing presses as per the information presented in the previous Table. Four firms out of 10 said

Table 7.57 : Causewise Analysis of why some side-activities are pursued

Cause	No. of presses responding
1. The side activity solves the liquidity problem	2
2. The side activity helps to spread the tax liability	1
3. It allows some surplus funds available for investment in the present business	1
4. It keeps the activity going in the time of slack period	4
5. These activities are comparatively freer from legal complications	2
Total :	10

that they seek to follow some side activity because it keeps them moving in the slack period of business. Two firms believe that it solves their liquidity problem. Two firms resorted to some side activity because those were comparatively freer from legal complications. Two other causes have also been presented, one firm each has resorted to be pursuing those causes.

7.36 Pricing Behaviour

The printing firms in this city are large in number and due to the typical nature of this industry, they have to compete with each other on the basis of prices charged, quality of product, conditions associated with sale, etc. But competition does not mean, in practice that the firms charge one and the same price. For a given specific job, as the inquiry revealed, the firms under inquiry charged different prices, the range of prices quoted showed a fairly wide variance. The firms, though competing between each other could successfully charge one's own price, partly because, as typical to printing industry, quality of a job completed acts as a variable factor to enable the firm to charge its own independent price. The firm might be in a position to charge a higher price, thanks probably to the ignorance of the consumer.

For a certain job to be printed, the presses under survey were willing to charge various prices, the range of

which has been shown in Table 7.58. Ten presses (18.87 per cent out of the total of 53 sampled out) were willing to charge amount not exceeding Rs. 30/- for that job. Twenty two presses (41.50 per cent from the total) were willing to charge within the price range of Rs. 31 and 40. Seven presses (13.21 per cent) quoted their rates to be between Rs. 41 and 50 for the same job. Six presses were to accept only between Rs. 51 to Rs. 60 for the job of the same specification, while, 1 press could charge only above Rs. 60/- for the same job. Thus the same job of getting a letterhead printed is available for a low price of about Rs. 25/- or for a

Table 7.58 : The extent of variety of Prices quoted for one and the same job

Price quoted for letter press composing and printing of letterhead in black ink, matter in English, (excluding paper and binding cost) 1000 copies		
Category	No. of presses reporting	
1. Below Rs. 30	10	(18.87)
2. Between Rs. 31-40	22	(41.50)
3. Between Rs. 41-50	07	(13.21)
4. Between Rs. 41-60	06	(11.32)
5. Above Rs. 60	1	(1.89)
6. This type of job not undertaken	07	(13.21)
Total :	53	(100.00)

considerably higher price, more than double than the one quoted by some firms. Thus each firm, based on one's own locational advantage, or reputation or due to similar factors, establishes its own price range of product, and even in a small urban market like Pune City, the market for the printed product remains heterogeneous and segregated.

On inquiry as to how, in practice, the firms try to determine the price of the printing service which they cater, the firms again came out with various answers. These responses have been presented in Table 7.59. Only 18 presses (33.96 per cent of the total) were very clear and categorical in their response that they measure time, material and labour involved in completing the job and thus they fix up the price accordingly. This is the scientific method and thus the firm can cover up the cost of production entirely and also can keep some profit margin while the price is being fixed. Twelve presses (22.64 per cent of the total) said that they followed only an ad hoc method while fixing the price suggesting that no systematic method is followed by them. Even some subjective element might creep in while fixing the price when ad hocism is followed. Eleven presses revealed that they followed the traditional method, meaning thereby that they continue to charge more or less the same prices for days together and do not necessarily keep them dependent on the business situation prevailing around them. While opting for this alternative, some firms agreed that

they did not give any serious thought to the modus operandi of pricing of a printed product. Four presses followed the method of following the other firms in the market. They would just charge the same rates or similar rates as other presses in the area. Only 1 firm of the sample declared that

Table 7.59 : Method of Fixing the Rates for Various Printing Services

Method	No. of printing presses responding	
1. Ad hoc	12	(22.64)
2. Traditional	11	(20.75)
3. Based on other presses	4	(7.55)
4. Measuring time, material and labour involved	18	(33.96)
5. By negotiations	1	(1.89)
6. Any other method	-	
7. Employing methods No.3 and 4 together	4	(7.55)
8. Employing methods No.3, 4 and 5 together	3	(5.66)
Total :	53	(100.00)

it follows the method of negotiating the rates with the client. In fact, this method has several advantages because the client is taken into confidence about the rate fixation. His participation in the rate fixation establishes a close

and cordial rapport with the press. This certainly has a long term impact. The client can negotiate for a long term printing contract with the firm or for larger volume of work in future. But firms in this industry seem to be giving little weightage to these advantages. It may be said again that this may be due to high degree of competition which the firms face and therefore they seem to be less interested in this way of price fixation. In total 7 firms (13.21 per cent of the total) are observed to be following the combination of methods noted in the table.

7.37 Sub-Contracting

One typical feature of the business practice followed by the firms from this industry was to pass on some part of their printing job to some other press. Many firms were observed to be doing this as a regular practice. The Table 7.60 shows that 36 out of 53 firms (i.e., 67.92 per cent of the total) pass on some part of their work to some other firm. The proportion varies widely. While on the one hand, 10 firms declared that hardly 10 per cent or lower volume of their annual total printing output is passed on to some other colleagues within the industry. On the other hand 2 firms declared that more than 50 per cent of their annual work is got done from some other firms within the industry. This extent of sub-contracting the work in the case of 36 firms (67.92 per cent) is alarming.

Table 7.60 : "How much volume of your annual output is sub-contracted to other presses?"

Category	No. of presses reporting	
1. More than 50%	2	
2. Between 41 to 50%	3	
3. Between 31 to 40%	5	
4. Between 21 to 30%	8	
5. Between 11 to 20%	8	
6. 10% or less	<u>10</u>	36 (67.92)
7. Zero	16	
8. Not reported	<u>1</u>	17 (32.08)
Total :		<u>53 (100.00)</u>

The Table 7.61 records the causewise analysis as to why the firms prefer to get the work done from some other firms rather than doing it themselves. It can be seen that the exigencies of the rush jobs to catch the delivery dates, compelled the firms to seek the help of some other firms. Eleven firms out of 36 had to give out this reason for subcontracting. Seven firms said that the men and machinery at their hand could not cope up with the job to be completed and thus they had to go to some firms who would do justice to the job required. Another 7 firms felt that it was both

Table 7.61 : Causewise analysis as to why some part of the annual volume of production is fulfilled with the help of other presses through sub-contracting.

Cause	No. of presses reporting
1. Due to rush of the delivery date	11
2. Men and machinery insufficient at own press	7
3. Pressure of the situation	5
4. Better quality work done by others	6
5. It is cheaper and quicker to get the work done from outside	7
Total :	36

cheaper and expeditious to get the job done from outside than continue to do the same at their premises. Instead of disturbing the present job line, the new job can be got done from some firm and the schedule could be maintained. Five firms said they had to do this because of labour absentee or machine failure. Six firms confessed that other firms could do the same job in a better way and so the clients would be better satisfied if the job is printed through some other firm by sub-contracting.

7.38 Capacity Utilization

The extent of capacity utilization is one more indicator of the performance of business firms. The firms under survey were asked to record their estimate of capacity utilization. Before they could make out their proportion of using production capacity, they were told to ignore the seasonal variation in their volume of business. They were also told to ignore the effect of changes in their capacity itself, if any, because to adjust to the new capacity takes some time and it affects use of capacity. Thus, only their general experience about the volume of business carried out was recorded.

The Table 7.62 shows that out of the total, only 11 firms recorded 100 per cent or higher utilization of their capacity. They could make full use of their men and machines. Twenty eight firms (52.83 per cent of the total) declared that the extent of their extent of capacity utilization ranged beyond 80 per cent but less than 100 per cent. In total 14 firms (26.42 per cent of the total) recorded their capacity utilization to be less than 80 per cent. Out of which one firm said, they kept their capacity idle to a very great extent, and thus on an average used their capacity only to the leve ranging between 20 per cent and 39 per cent.

The Table 7.63 goes to record causes of underutilization of capacity of printing firms under survey. According

Table 7.62 : Capacity Utilization

Extent of capacity utilization (in percentage)		No. of printing presses responding	
1.	100 or more	11	(20.75)
2.	80 - 99	28	(52.83)
3.	60 - 79	09	(16.98)
4.	40 - 59	04	(7.55)
5.	20 - 39	01	(1.89)
Total :		53	(100.00)

Table 7.63 : Causes of underutilization of capacity

Cause	No. of presses reporting the cause	
1. Unskilled workers	10	(18.87)
2. Old and obsolete machinery	06	(11.32)
3. Tough competition prevailing in industry	04	(7.55)
4. Insufficient demand	08	(15.09)
5. Absenteeism of workers	10	(18.87)
6. Bad management	1	(1.89)
7. Insufficient capital	2	(3.77)
8. Shortage of raw material	-	
9. Any other reason	1	(1.89)
10. Not applicable as capacity is fully utilized	11	(20.75)
Total :	53	(100.00)

to the firms, unskilled workers and absenteeism of workers are two main causes why firms have to keep some of their capacity underutilized. Twenty firms have noted these two causes together. Six firms could not reach their full capacity level because of old and out-dated machinery. Eight firms felt that their capacity was not fully utilized due to insufficient demand for their printing service. Four firms ascribed the underutilization to the competition which they felt from the market. Some other reasons have also been noted in the Table.

7.39 Expansion and Diversification

When the firms were asked as to what, according to them, was a major constraint on the expansion and diversification of their business, they came out with various responses. They have been recorded in the Table 7.64. The biggest number, i.e., 13 firms (24.53 per cent from the sample under survey) felt that due to severe competition faced by them in the industry, they were not confident and were reluctant to attempt any expansion and diversification. Twelve firms (22.64 per cent of the total) felt that due to paucity of capital prevented them from trying for any expansion and diversification of any worthwhile size. Some further constraints noted by the firms were : shortage of machinery, legal difficulties, insufficient business space, etc. Some firms noted a combination of some of these constraints.

Table 7.64 : Main constraints on expansion and diversification

Response	First ranking revealed by the responding printing presses	
	No. of presses	
1. Face severe competition in trade	13	(24.53)
2. Demand not sufficient	-	
3. Raw material not available	-	
4. Shortage of capital	12	(22.64)
5. No knowledge of new technique	-	
6. Insufficient accommodation	07	(13.21)
7. Shortage of machinery	08	(15.09)
8. Legal difficulties	07	(13.21)
9. Any other	03	(5.66)
10. Combination of 1, 2 and 8 above	03	(5.66)
	53	(100.00)

7.40 Raw Material

Deliberating further on the front of raw material was necessary because it is the most sensitive and important issue faced by firms always. Data was collected about the situation regarding the items of raw material. It has been placed in Table 7.65. A large majority of firms, 37 out of 53, i.e., 69.81 per cent, felt that the raw material prices

Table 7.65 : Experience of Raw Material

Response		No. of presses reporting	
1.	Shortage of raw material	4	(7.55)
2.	Difficulty in getting raw material	10	(18.86)
3.	Raw material prices rising rapidly	37	(69.81)
4.	Raw material prices fluctuating	1	(1.89)
5.	No response	1	(1.89)
Total :		53	(100.00)

were rising rapidly. Ten firms felt further that getting raw material items was a difficult job. Scarcities, legal difficulties, supply bottlenecks were felt by the printing presses. Four firms highlighted the shortages of raw material. One firm felt that the raw material prices were fluctuating.

To verify the claim of the firms that the raw material prices were rising rapidly, the data about the raw material prices was checked from the market. An inquiry into the prices of major raw material items, such as : paper, ink, lubricants, kerosene, chemicals, films, binding material, gum, glue was held. Firms were asked to give an estimate of the rise in prices of these raw material items in the last

three years. The same data, after putting together was cross-checked with the trade bodies such as Poona Press Owners' Association. Poona Paper Traders' Association, etc. It was revealed that the prices of raw materials of printing industry, during the last 3 years increased to the varying extent, the paper prices showing the increase of over 35 per cent during the last 3 years, the other prices rising between 8 per cent to 25 per cent upwards.

7.41 Productivity

The inquiry about the operations of a printing firm also concentrated on the techniques of improving productivity and efficiency. The Table 7.66 records the responses of the printing presses on the four measures which are taken by firms to ensure better scheduling of work, minimising wastage of time material and accounting for each one's contribution in the total work. The first row in the Table notes about the use of the time chart memo. This is a method to note the time each operation takes for completion. Proper planning as per the time taken by various operations involved in completing a job ensures that the time is not wasted at any point. Imbalance between the operations results into machines remaining idle on the one hand and also possibility of missing the delivery dates of jobs.

The material-use memo keeps a record of materials used in various departments. For instance, the quantity of ink

Table 7.66 : Use of Some Techniques leading to Higher Productivity and Efficiency

	No. of presses responding				Total
	Yes	No	Do not know	Not reported	
1) Whether the presses use time chart memo	5	41	4	3	53
2) Whether the presses use material use memo	5	41	5	2	53
3) Whether the press follows wastage accounting	6	39	3	5	53
4) Whether the press keeps work measurement on the individual basis	7	37	5	4	53

used in the machine section or quantity of chemicals used in the platemaking section of an offset printing press or the quantity of film and paper used in the processing section of a press would make sure that the material is used properly, it is not wasted, and it tallies with the output of that particular section. An ideal system would be to verify by the manager that the total material issued, material used, wastages noted and total output recorded all tally with each other. This is another way to check up the quality of materials against the desired specifications of the client.

Similarly, wastage accounting is also of immense importance from the view point of both materials management and also cost minimisation. In printing industry, it is of still more significance. For example, it was learnt that different quantities of paper are wasted when different types of printing jobs are taken up. Black ink printing needs about 2 per cent to 5 per cent extra paper than the print run ordered. Colour printing requires between 4 per cent to 8 per cent extra paper to account for wastages. Multi-colour printing requires still larger quantity for making up wastage of paper. If proper accounting of this is not kept, the order cannot be fulfilled satisfactorily and that would certainly hamper business reputation.

To ensure proper and just wages to the workers, many times, wages are paid according to the work contributed. The payment of incentives also necessitates proper measurement of work done on the individual basis.

The firms under research were asked whether they followed any of the four techniques. They were explained what these concepts meant and later on their responses were recorded. It is evident from the Table that a very small minority in fact followed modern techniques of systematic production planning and accounting. Only 5 firms of the total of 53 actually kept a time-chart memo of jobs. Forty one did not keep this type of memo, 4 firms said they did

not know about this at all and 3 did not report at all. Responses in the affirmative came from 5 firms for maintaining material-use memo, 6 firms for wastage accounting and 7 firms for individual work measurement. The number of printing firms in Pune is observed to be growing, as noted earlier, but the quality of management practices has still been traditional one. Many new techniques of speed, accuracy, standardization and precision are yet to trickle down to printing firms in the city of Pune.

7.42 One Client Dependency

Another feature of the mode of business which printing firms follow and which was noted prominently in this trade was one-client dependency of these firms. It is common in practically all types of businesses but it was noted more prominently in the present research. The printing press depends upon only one client majorly for the supply of jobs to it. A large percentage of annual printing work is done for that firm only. In this inquiry, as noted in the previous chapter, we have kept away the captive plants which work exclusively for one client, usually under the same ownership and management. The study revealed that there are some obvious advantages of this one-client dependency. The client can guarantee long term arrangements for continuous supply of job to the given printing firm. The press can be guaranteed of the work and plan for future on the stable

basis. For client also, this system is advantageous because the press can give some concessions due to his patronage, e.g., concessional printing charges, trade credit, etc. But on the other hand, if due to change in the business policy or any other reason, if the client stops placing order, the press loses large part of its business and that loss is considerable. As noted in one of the earlier chapters, many printing presses in Pune and also from Bombay, suffered a severe blow when the government nationalized the school text book industry. The presses and publishers lost business to the tune of lakhs of rupees per year. This can be seen as an illustration of one client dependency.

Table 7.67 shows the extent of one client dependency as revealed by printing presses under research. Three presses revealed that they depend on one client to the extent of 80 per cent to 100 per cent. This is considerable dependency and the firms are subject to all the possible advantages and disadvantages of this system. Four firms declared their dependency on one client to the tune of between 60 per cent and 79 per cent. Another 13 firms declared their dependency between 40 per cent and 59 per cent of their annual output. In total 20 firms thus show one client dependency of 40 per cent or above. This is a fair percentage of their one client dependency. Eighteen firms show a low dependency, ranging between 20 per cent and 39 per cent.

Table 7.67 : Dependence on One Client only

Percentage share of one client in the total annual output		No. of printing presses responding	
1.	80 - 100	3	(5.66)
2.	60 - 79	4	(7.55)
3.	40 - 59	13	(24.53)
4.	20 - 39	18	(33.96)
5.	No dependency	15	(28.30)
Total :		53	(100.00)

Fifteen firms said they do not have any such one-client dependency.

7.43 Client Retention

Table 7.68 records the responses of printing presses regarding one more indicator of the successful business policy. Due to continued satisfactory business practices, a firm can be successful in retaining a certain client or clients for years together. Nine firms said that they had been providing printing service to this clientele for more than 15 years. Four firms said they were doing it between 10 to 15 years and 20 firms were doing the same for the period between 5 to 10 years.

Table 7.68 : Retention of Big Client

Duration		Responding Printing presses	
1.	15 years or above	09	(16.98)
2.	10 to 15 years	04	(7.55)
3.	5 to 10 years	20	(37.74)
4.	3 to 5 years	09	(16.98)
5.	1 to 3 years	11	(20.75)
Total :		53	(100.00)

Putting together the information presented in Tables 7.67 and 7.68 above, it can be said that the firms within the industry face high degree of competition and therefore do not show one client dependency to a great extent. Competition makes them seek business from a large number of firms and thus merely 20 firms (37.74 per cent of the total) show one client dependency of 40 per cent or above. Even the retention of big client also shows a mixed picture. About 20 firms could retain their big clients upto a period of 5 years only, once again suggesting that the firms due to competition as one of the contributory factors had to face a shift in the patronage of their clients. But also 13 firms of the total, 30.53 per cent of the total could enjoy patronage of their big clients for a period of 10 years and longer period.

7.44 Job Rejection

The percentage of job rejection is an indicator of the quality and punctuality of a printed job, offered at a reasonable price. Due to certain reasons, the job is rejected by the client, leading to loss of value of material and labour to the firm. The firms were asked about the percentage of their rejected jobs. Twenty six firms (i.e., 49.06 per cent of the total) reported no rejection of their jobs. Twenty three firms reported upto 10 per cent of their annual jobs were rejected. In the case of only 2 firms the job rejection ranged between 11 per cent and 20 per cent. In the case of another 2 firms, more than 20 per cent of their annual jobs were rejected. The Table 7.69 records this information.

Table 7.69 : Extent of Job Rejection

Extent of Rejection		No. of presses responding	
1.	Zero	26	(49.06)
2.	1 to 10%	23	(43.40)
3.	11 to 20%	02	(3.77)
4.	More than 20%	02	(3.77)
Total :		53	(100.00)

As for the causes of job rejection, it was revealed, as is depicted in Table 7.70 that the quality of job below the expectation of the client which necessitated rejection in the case of as many as six firms. Negligence of workers

Table 7.70 : Causewise analysis of Job Rejection

Cause	Ranking given by responding presses	
1. Late delivery of the job	02	(3.77)
2. Job finished below expected quality	06	(11.32)
3. Use of below quality raw material	01	(1.89)
4. Negligence of workers	13	(24.52)
5. Negligence of management	04	(7.55)
6. Any other	01	(1.89)
7. Not applicable as the press has zero rejection	26	(49.06)
Total :	53	(100.00)

was the main cause reported by 13 firms. Four firms admitted that the negligence on the part of management resulted into rejection of job by clients. Two firms ascribed the job rejection to non-keeping of the delivery date. One firm thought the rejection was due to use of below quality raw material, such as low quality paper or ink, etc.

7.45 Proof Reading and Correction

The Table 7.71 states the situation on the front of reading and facilities of proof/correction. This is quite necessary in every printing press and more true at presses where book work is carried out. Separate arrangements for proof correction ensures high quality of the printed job. Only 19 presses (35.86 per cent of the total) expressed that they had

Table 7.71 : Printing Presses having Separate Arrangements for Proof Reading

Response	No. of presses responding
Yes	19 (35.86)
No	26 (49.05)
Not required	6 (11.32)
Not required	2 (3.77)
Total :	53 (100.00)

separate arrangements for getting proofs corrected. Twenty six presses did not have this arrangement. Six presses reported they did not require the same. Two presses did not report on this query. Proof correction is an important aspect at the editing stage and is a precondition for neat and accurate printing, but it is evident that nearly half

of the presses did not have this facility on their premises.

7.46 Jobs on the 'Tender' System

The next inquiry deals with the practice of tender system prevalent in the printing industry. Many organizations, government departments, cooperative stores, cooperative banks invite tenders for printing work to be done and printing firms are invited to file their tender quotations. They are opened at a certain specified time and the printing order is placed with the press usually quoting the lowest rates among the firms filing tender. While, on the face of it, this system encourages fair competition and gives justice to those who are willing to quote a lower rate, it is evident from the Table 7.72 that the system is not so popular among presses. Twenty six presses, i.e., 49.06 per cent do not accept any work on the tender basis. In total there are only 8 presses out of the sample of 53 presses (i.e., 15.09 per cent only) which carry out 40 per cent or higher portion of their annual work on the tender system. Thirteen presses, i.e., about one fourth of the total claim upto 20 per cent of their annual work only by the tender system.

The Table 7.73 analyses the causes of the fact as to why printing presses prefer to keep away from this system of obtaining orders. Ten firms feel that the tender jobs fetched about 10 per cent lower rates than the normal rates

Table 7.72 : Proportion of Work on the "Tender" Basis

Proportion in percentage	No. of printing presses responding	
1. All	-	
2. 80 to 100%	02	(3.77)
3. 60 to 80%	01	(1.89)
4. 40 to 60%	05	(9.43)
5. 20 to 40%	05	(9.43)
6. 1 to 20%	13	(24.53)
7. Nil	26	(49.06)
8. Not responded	1	(1.89)
Total :	53	(100.00)

Table 7.73 : Experience about the Jobs on 'Tender' Basis

	No. of presses responding	
1. "Tender jobs fetch the same rates as non-tender jobs"	07	(13.21)
2. "Tender jobs fetch higher rates as compared to non-tender jobs"	-	
3. Tender jobs fetch lower rates than the non-tender jobs		
A) Upto 10% lower rates	10	(18.87)
B) 10 to 20% lower rates	07	(13.21)
C) 20 to 30% lower rates	03	(5.66)
D) 30 to 40% lower rates	-	
4. Not applicable since no 'tender' jobs undertaken	26	(49.05)
Total :	53	(100.00)

quoted for printing jobs. Seven firms thought this proportion to be between 10 and 20 per cent and 3 firms felt that the tender system fetched 20 per cent to 30 per cent lower rates than the normal printing rates. Only 7 firms felt that the tender jobs allow the same rates as non-tender jobs.

7.47 Recovery of Bill Amount

As soon as the printing job is completed and delivered, the bill against the job is submitted and the payment is recovered. But it takes considerable time for firms to recover the bill amount receivable from clients. The best situation out of the several alternatives is of course the advance payment - in part or in full or at least payment to be recovered against delivery of the finished product. But as the Table 7.74 shows, none of the firms reported that they received advance payments or received payment against delivery. Payment recovered after a long duration in fact puts the firms to many hardships. They fall short of working funds to that extent. It was pointed out by respondents during discussions that amounts payable by them to the suppliers of raw material are essentially on cash basis or very short trade credit is allowed, but amounts receivable are very slow to be coming up. This invariably led to working capital famine felt by the printing presses. To borrow from bank or similar institution is both time consuming and expensive. Delayed recovery also means lower amount in

Table 7.74 : Duration Required for Recovery of Bills Receivable

Average time taken for recovery of bill amounts	No. of presses reporting	
1. Advance payment and/or cash on delivery	0	
2. Before expiry of 30 days after delivery	18	(33.96)
3. Between 31 and 60 days	23	(43.39)
4. Between 61 and 90 days	10	(18.88)
5. Beyond 90 days	2	(3.77)
Total :	53	(100.00)

real terms; when value of money is eroded during inflation. That it creates problems for onward payments is also very significant.

The Table makes it clear that only 18 firms (i.e., 33.96 per cent of the total) were in a position to recover their receivable amounts within the expiry of 30 days from the date of delivery of job. In the circumstances, this seems to be a reasonable period of recovery of bill amounts. Twenty three firms (43.39 per cent of the total) said they could recover their bill amounts only within 31 to 60 days from the completion and delivery of jobs. Ten firms from the sample, i.e., 18.88 per cent declared that they could recover their bill amounts only within 61 days and 90 days.

Two firms said their recovery of bill amounts stretched beyond 90 days also. While recording responses on this query in some cases, the respondents pointed out that they received payments from their clients in instalments. In this matter the data noted in the above Table pertains to the time taken when the last instalment was effected.

It can be seen that the firms from this industry allow long durations of trade credit. During informal discussions the firms expressed a sense of helplessness in recovering the bill amounts within about a month's time. It was revealed during the same discussions that some firms use the allowance of trade credit as an instrument of effecting a non-price competition. The firm which allows a longer trade credit is preferred by clients of printed products than the one which insists on cash or near-cash transactions. In a small geographical area, when firms clamour for printing jobs, unduly longer trade credit facilities becomes an effective instrument in the hands of closely competing firms.

7.48 Geographical Dispersal of Clients

The nature of printing industry is one of providing one of the essential services of the modern civilized life. The presses majorly cater for the clientele situated around their own premises. The Table 7.75 presents the geographical dispersal of the clients served by the printing presses. Ten presses (i.e., 18.88 per cent) reported that most of

Table 7.75 : Geographical Dispersal of the Clients
being Served by Printing Press

Location of clients providing most of the printing work	No. of presses responding	
1. Close to the premises	10	(18.88)
2. Not close but within city area	24	(45.28)
3. From suburbs	11	(20.75)
4. From out of Pune	8	(15.09)
Total :	53	(100.00)

their printing work comes from the clients situated close to their premises. For instance, the commercial printing jobs of printing letterheads or invoice books to be undertaken for clients close to the press. Another 24 presses (i.e., 45.28 per cent of the total) declared their clients came from the city area only. If these two categories are put together, in the case of about 64.16 per cent of presses reported that their clients came from the area fairly close to their premises. Only 11 presses from the total sample reported that they served the clients from the suburbs and 8 firms served the clients from out of Pune.

7.49- Membership of Trade Associations

The Table 7.76 states about the tendency among the printing presses to become members of any of the trade asso-

Table 7.76 : Membership of Trade Organisations,
Associations

	No. of presses responding	
1. Members of at least one trade organization	30	(56.60)
2. Members of 2 trade organizations	08	(15.09)
3. Members of more than 2 trade organizations	1	(1.89)
4. Members of none	14	(26.41)
Total :	53	(100.00)

Organizations : Poona Press Owners' Association, Poona Lithographers Association, Mahratta Chamber of Commerce and Industry, Poona Blockmakers' Association, etc.

ciations present in Pune. This membership according to presses certainly gave some advantages. Coming close together on the part of firms from the same trade and profession enable them to understand each other better, to share common views to seek each others' advice on common problems. This association worked as a common front against consumers or government. In Pune there are several trade associations operating in the field of printing and allied arts. The oldest one is the Poona Press Owners' Association, and some other are : Poona Lithographers Association, Mahratta Chamber of Commerce and Industries, Poona Block Makers' Association,

etc. The Table 7.76 reveals the situation about the membership which these printing presses hold. Thirty presses (i.e., 56.60 per cent of the total) were the members of one trade association. Eight presses were members of two trade associations, and 1 press reported that it was a member of more than 2 associations in Pune. Thus in total 39 presses (i.e., 73.58 per cent of the total) were members of at least one trade association present in Pune. But it was equally pertinent to note that 14 presses (i.e., 26.41 per cent of the total) were members of none of the associations.

Even though one is member of any trade body, it remains to be seen as to whether one attends meetings of those trade bodies regularly. The Table 7.77 records the quantum of interest which member firms take in attending meetings of the associations. Eleven firms declared they attended meetings regularly, 14 firms from the sample said that they attend the meetings frequently, while 9 firms' owners attend meetings rarely, the owners of 4 firms do not attend at all.

And even the meetings are attended whether one derives any benefit from the trade association is again another question. To check this feed back, the responding firms were asked whether they found the trade association active and useful in conducting business. Only 15 firms (i.e., 28.30 per cent of the total) found them to be very useful. Another 14 declared that they were moderately useful, but

Table 7.77 : Attending the Meetings of Trade Associations

Frequency	No. of presses reporting
1. Regularly	11 (20.76)
2. Frequently	14 (26.41)
3. Rarely	09 (16.98)
4. No attendance	04 (7.55)
5. Not reported	01 (1.89)
6. Not applicable since no membership	14 (26.41)
Total :	53 (100.00)

it is rather significant to note that as many as 10 firms, i.e., about 18.86 per cent of the total sample, did not find any usefulness at all in the Trade Association, of which they were members. They were also asked whether they found the trade journal of the Association useful. As already mentioned earlier, a journal Mudran Prakash is published from Pune for more than 50 years in Pune. The Mahratta Chamber of Commerce and Industry has been publishing their periodical in Marathi, viz., Sampada, for the last 40 years. The Maharashtra Mudran Parishad also has been publishing a periodical in Marathi, viz., Mudra. But it was observed from the responses of the firms as recorded in the Table 7.78

Table 7.78 : About the Benefits from the Trade Associations

	Very useful	Moderately useful	Not useful at all	No member- shipt	Total
1) Find the Trade Association/s to be active and useful in conducting business	15 (28.30)	14 (26.42)	10 (18.86)	14 (26.42)	53 (100.00)
2) Usefulness of the trade journal	9 (16.98)	18 (33.96)	12 (22.64)	14 (26.42)	53 (100.00)

Figures refer to percentages of the total responding presses

that only 9 firms found the trade journals very useful, another 18 only moderately useful, but 12 of them admitted that they did not find those journals useful at all.

When in Table 7.76, 14 firms from the sample were observed to be members of none of the Trade Associations, an inquiry was made as to why the situation was so. Causes were asked and the Table 7.79 records them. Eight firms out of 14 which were members of none of the organisations, did not think the organisation would benefit them in any way. Five firms admitted that they were no members of these association because none approached them for the same. One firm even said that it had not heard of the existence of any such organization.

Table 7.79 : Causes for not being member of any of the Trade Association

Causes	No. of presses responding	
1. "Do not know about any such organization/s"	1	(7.14)
2. "None came to us for making us member"	5	(35.72)
3. "Did not think the organization would benefit us in any way"	8	(57.14)
Total :	14	(100.00)

7.50 Feedback from Employees

While conducting day to day business, it is interesting to see in what ways employees participate in decision-making process. That would inculcate the sense of participation among employees and that would act as a moral incentive to them to come out with the best of their might. This feed back has been checked in Tables 7.80 and 7.81. Initially they were asked whether employees make any suggestions for improvement in the functioning of the press. Thirty presses reported in the affirmative while 15 in the negative. Eight printing presses did not report. Collecting suggestions from employees was obviously half the job. The presses were further asked whether they accepted them and put them into use. Out of the 30 firms reporting

Table 7.80 : Feedback from the Employees I

	Reporting Presses			Total
	Yes	No	Not reported	
"Do employees make any suggestions for improvement in the functioning at the press?"	30 (56.60)	15 (28.30)	8 (15.10)	53 (100.00)

Table 7.81 : Feedback from the Employees II

	Reporting presses				Total
	Yes	Yes, with modifications	No	Not reported	
"Do you accept them and put them into use?"	17	12	1	-	30

positively on the earlier inquiry, 17 firms reported that they did accept those suggestions and put them into use. Twelve printing presses accepted them with modifications. But only one firm was such that it did not accept any of these suggestions.

7.51 - Business Strategy

The present survey attempted to study the business practices of the printing firms. Therefore inquiry into the

strategy which is followed by these firms to claim order was of special significance. The responses of firms on this inquiry have been recorded in Table 7.82. It has been observed that out of the sample none of the firms chooses to advertise for obtaining orders for printing jobs. As noted earlier, depending exclusively upon tender system is also not preferred by printing firms, and in fact only 2 firms from the sample showed their inclination in its favour. The firms are observed to be following more personal ways of securing orders for their firms and therefore personal visits and order supply through acquaintances have claimed highest preference from the firms under study. In total 29 firms (54.72 per cent from the total) showed preference for these two methods either separately or their combination. Another 16 firms (30.19 per cent of the total) followed the methods of personal visits and through acquaintances coupled with that of filing tenders. Getting work through intermediaries is also not chosen by firms and only 1 firm accepted that method in full and another five firms relied on the intermediaries along with the dependence on the acquaintances to provide printing jobs.

7.52 Laws and Printing Industry

In continuation with inquiry into a wide ranging spectrum of activities of printing firms, they were asked as to what they felt of the laws applicable to printing

Table No. 7.82 : Strategy for claiming orders

Method used	Responding presses	
1. Give advertisements	-	
2. File tenders	02	(3.77)
3. Claim more work through personal visits	03	(5.66)
4. Get more work through acquaintances	04	(7.55)
5. Get more work through intermediaries	01	(1.89)
6. Combination of 2, 3 and 4 above	16	(30.19)
7. Combination of 3 and 4 noted above	22	(41.51)
8. Combination of 4 and 5 noted above	05	(9.43)
Total :	53	(100.00)

industry. Twenty firms did not report. But out of remaining, eleven firms felt that laws pertaining to printing industry were rigid and were posing problems in day to day operations of the printing firms. Eight firms felt that the laws were harsh to small printers. Another eight firms felt that the minimum wage act is one sided and it should also guarantee minimum work to be put in by the worker. Three firms suggested that the tax rates be reduced, while one firm felt that the minimum wages be raised. Two firms

Table 7.83 : Responses about the Laws Applicable to
Printing Industry

Response	No. of presses responding	
1. "Minimum wages need to be raised"	01	(1.89)
2. "Alongwith minimum wages, the minimum work must also be guaranteed."	08	(15.09)
3. "Laws are very rigid."	11	(20.76)
4. "Laws treat small printers very badly."	08	(15.09)
5. "Tax-rates be reduced."	03	(5.66)
6. "Restrictions on imports be reduced to avoid blackmarketing"	02	(3.77)
7. Not reported	20	(37.74)
Total :	53	(100.00)

had a specific point about import of raw material and machinery. They were referring to film, paper, ink and other material. Two firms suggested that restrictions on imports be reduced; so that black marketing of these materials.

7.53 Future

After noting various aspects of the business operations of printing firms, they were asked to say whether they were optimistic about future of printing industry. Taking into

account the technological changes, fairly high degree of competition, changing nature of demand and the days of computerization, they were asked to give their noting. Their responses are noted in Table 7.84. Only 15 firms, i.e., 28.30 per cent of total said that they were very

Table 7.84 : "Are you Optimistic about Future?"

Degree of optimism	No. of firms reporting
1. Very optimistic	15 (28.30)
2. Moderately optimistic.	20 (37.74)
3. Neutral	5 (9.43)
4. Pessimistic	7 (13.21)
5. Strongly pessimistic	6 (11.32)
6. Not reported	-
Total :	53 (100.00)

optimistic about future. Twenty firms were, a little less optimistic, i.e., they were moderately optimistic about future. Five firms were neutral and thus were undecided about being optimistic or pessimistic. But there were some firms which were certain about their choice in the direction of pessimism. Seven firms from the sample were pessimistic about future and another six were even strongly pessimistic. What can be said about the net picture emerging out of this inquiry? About 35 firms, i.e., 66.03 per cent of the total

are optimistic about future but 13 of them, i.e., 24.53 per cent are pessimistic and thus a mixed picture emerges. Since the industry is passing through great changes of technological transformation, innovations, automation, pattern of demand changing and so on, the picture is a mixed one.

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CHAPTER 8

SUMMARY, CONCLUSIONS AND POLICY RECOMMENDATIONS

8.1 Introduction

In the light of the objectives of the present study, an attempt was made in the previous chapter to present a wide variety of facets of the printing industry existing in Pune. The analysis was arranged under four categories: General aspects of the units sampled out for an intensive study; labour and wages; economic performance and rate of return and, finally the business behaviour. The sample of 53 printing presses was representative enough to allow generalizations about the printing activity in the city. While it is not required that observations about each aspect of the printing activity be repeated here, some significant observations deserve a mention. This would enable us to put concluding observations and policy recommendations in proper perspective.

8.2 Observations from the Study

At the beginning, it was pointed out that the printing firms in the city of Pune show a varying nature in regard to type of business organization, number of workers per printing press, capital invested per printing press, etc.

Within the industry itself, some firms follow only traditional types of business such as letterpress composing or binding, while some are engaged in modern type of businesses such as photocomposing, and off-set printing, etc. Informal sector predominates, which means proprietary and partnership firms outnumber the limited companies and cooperative printing presses. The system of contractual labour is seen to be widely prevalent. Thus, about 28.12 per cent of workers worked under the category of contractual and piece work employees. Workers also show a high degree of turnover per firm, suggesting instability and discontinuity in the flow of work carried out. The reasons behind this phenomenon have been enumerated already in the previous chapter. The existence of moonlighting (i.e., parallel jobs undertaken) was also observed on a wider scale. Out of some other peculiarities of labour from this industry, it is worth taking a note that workers do not enjoy any systematic and scientific promotion scheme, nor do they enjoy payment by results. Incentive system of any sort is absent in about 70 per cent of printing presses studied. Again, though it was true that workers from this industry were not showing symptoms of any occupational diseases, it was also argued at length that there was sufficient room for taking more adequate care of workers' health. That the printing presses are not careful enough to even provide for a first aid box is sufficient to support

this observation.

As for the productivity of workers, one of the major determinants of productivity was identified to be the training of workers. Workers from this industry lacked formal training in this craft to a large extent.

Firms were marked to be keenly competing and in fact, very close competition was marked as one of the constraints on further expansion and diversification. Internal diseconomies arising out of administrative overheads, specialized services and quality maintenance are further constraints on the growth of the size of firms. The situation in regard to raw materials was often alarming. Firms experienced rapidly rising prices of paper and ink, film and packaging material coupled with frequent scarcities of the same. The firms under study also reported legal restraints in terms of too large a number of laws and rules. A large section of the respondents felt the prevailing laws to be rigid and wanted them to be simplified. Finally, at least about one fourth of the firms surveyed had reason to be pessimistic about future, due to their own impression about the days to come.

8.3 Conclusions

After studying in depth the operations of printing firms, some conclusions may be drawn. Needless to add that the conclusions are within the constraints of the

survey enumerated at various places in chapter No. 6 and 7. Based on the data collected and analysed, there is room to believe that the growth of economic activity in general is invariably accompanied by growth of the printing industry.¹ The industry should certainly hope for widening scope in future. Need for more intensive documentation of all kinds, personal printing, printing service showing higher income elasticity of demand, more extensive use of printed literature due to higher literacy and more leisure, more research and development in industries, packaging revolution assisting the marketing of commodities... all are leading to printing activity showing growth, expansion and diversification.

This industry shall give continued scope to small firms along with the existence of large firms. For a small printing press an investment of about Rs. 15,000 to Rs. 20,000 is sufficient. The investment per job created works out to be about Rs. 8,000 to Rs. 10,000/-. The survey also covered cases of big printing presses such as a unit showing an investment of about Rs. 40,00,000 and the investment per job created works out to be about Rs. 30,000/-. Still further cases of the same nature in this industry can also be cited and they carry the point still further. A unit of photocomposition - an operation prior to offset printing - requires an investment of about

Rs. 5 lakhs or more and investment per job works out to be over Rs. 1,00,000/-.

One more peculiarity pertaining to this industry is the fact that internal economies of scale - mainly of large printing runs or large printing machines are undoubtedly available but for only a few big clients only. Pratten and Dean² have estimated the cost reduction resulting from the large print run. Sapre³ also has attempted to measure cost reduction due to large print run. For instance, in a particular case, the cost of printing a certain job (1000 copies, excluding paper) works out to be Rs. 2.64 per copy but the same falls to Re. 0.26 only (excluding paper) per copy when 1,00,000 copies are printed. This shows the fall of cost index from the base of 100 to almost 10 only. Under the circumstance, the clients taking advantage of a large print run of 50,000 or 1,00,000 or even more will only receive this benefit. But only commercial printing of standardized nature will necessitate printing firm to grow as an urgent requirement. Printing jobs are mostly on personal basis, and they want to cater for personal need and liking and thus the jobs such as letterheads or visiting cards or envelopes or invitation cards or wedding cards will always be to satisfy an individual client and the print run will be invariably about 2000 to 3000 or even less. The conclusion in this case is unavoidable that the motives for expansion or

modernization or innovation will not eliminate small firms from this industry and even though they modernize or go automatic, they will certainly keep room for small firms with comparatively lower capital, showing personal attention to meet individual needs for each and every client.

The nature of technology used by printing industry provides another explanation as to why the industry has every reason, not only to survive but to expand and even to diversify. The nature of printing technology can be termed as a mid-way to the modern sophisticated technology of computerization in industries. Apart from the very specialized and highly skilled jobs required now-a-days, such as retouchers or web offset operators, all the normal jobs can be mastered by about a year's formal or non-formal training and practice. Even though use of computers and LASER techniques grows in this industry, from the view point of an average printing press and an average worker, entry into the industry does not present a very high barrier. The industry will thus show a continuously expanding phase.

The study attempted here observed keen competition among firms. What about the nature of competition in future? The type of competition is the function of a wide variety of factors, such as nature of demand, and size of market and nature of firms and activities of firms and

so on. The printing firms will tend to compete closely with each other, will grow and diversify but the growth has narrow scope as far as backward and forward linkage is considered. Expansion from printing firms can go in the area of sale of similar products such as stationery or paper or wedding cards; or dealing in machine spare parts. Manufacturing of machinery can be taken up only as a rare exception. Entry into that field is many times more expensive and complicated. Discussions at the time of survey revealed that a unit of manufacturing printing machinery and spare parts would require an investment of about Rs. 50 lakhs if the traditional letterpress machinery is produced and at least about Rs. 55 crores approximately, if modern computer-based sophisticated machinery is produced. Or linkage can be considered in terms of producing paper or packaging material which also would involve use of intricate technology and investment worth a few crores of rupees. Thus establishing command through linkage shows severe limitations and thus firms within this industry tend to operate at a fairly high degree of competition. Even the growth and diversification on the lines of a conglomeration is not ruled out and the present survey observed that a small percentage of little over 10 per cent pursuing that line of expansion.

If the nature of technological changes and innovations in this industry is examined minutely, it will be seen that

the industry will face a series of fundamental changes in the immediate future. The use of computer techniques and LASER technology is only one aspect of these changes. More speed, better quality and standardization will come about in the industry. The age of word processors and table top printers, xerox machines will form the part of modern office equipment. Electronic typewriters along with the printer facility prepares the text, edits and scrutinizes it and obtains multiple copies of the same in a few minutes. This job would require a day or two if the same is done through the traditional printing press. To this extent the printing industry will lose its clientele in the traditional sense. But some firms will be quick enough to take up that line also and cater for those needs. The rest of the firms shall cater for the new entrants in the market, in terms of expanding clientele, higher literacy resulting into higher demand for printed literature, expanding trade and business giving rise to higher demand for commercial printing. Thus, to sum up, great upheavals are going to take place in various facets of this industry and the industry is poised to face this challenge. Being a service industry to cater for personal needs, dominated by small sized firms, the industry certainly shall face challenges in the days to come.

8.4 Suggestions of Policy Measures

The performance of any industry is dependent on several agencies : the government authorities, workers, financial institutions' attitude of entrepreneurs, etc. The study attempted so far has disclosed some weaker points where the concerned authorities and bodies need to focus their attention for all round improvement and better tuning of the industry. A few specific suggestions have been presented herebelow :

(A) To begin with, a lot much has been said about the primary data available about this industry at the Municipal Corporation and Cantonment levels. Various lacunae have been noticed in this important source of vital primary information. Steps are to be taken by the Corporation authorities to keep the record of business establishments more accurately, that too showing more systematic classification and updating, additions, omissions from this record be done more diligently. The Shops and Establishments Department has now been taken up by the State Government for the purpose of implementation and thus a wider administrative infrastructure can now be deployed for the same. When any attempt is made henceforth to take policy decision about this industry at the governmental level, this flow of more uptodate and accurate information would be of much help. The cantonment authorities also show a lapse of similar nature. After 1974,

(the year till then they recovered trade and profession tax within their jurisdiction) the Cantonment authorities stopped keeping any information about the nature of establishment, change in staff, nature of machinery, etc. Suitable changes at the Central Government level are required for a better data base of this important part of the service sector.

(B) Another area requiring close attention of the Government is the legal infrastructure on which the industry is standing. The Acts which are applied to this industry include basically the Factory Act, Minimum Wages Act, etc. It has already been pointed out in Chapter No.3 that it is necessary to take into account the paying capacity of the employer alongwith the necessary minimum wages when the laws are implemented. A standard about the minimum wage is not hard to be defined but a standard paying capacity of the employers cannot be generalized on any common footing. Therefore, employers are always explicit in saying that minimum wages has been a 'problem' before them. The Maharashtra Mudran Parishad long back has put forward plea for a more balanced solution of this problem.⁴ According to the Parishad, the weapon of minimum wages is being used by the government in an arbitrary and ad hoc manner. For example, the government makes the payment of special allowance compulsory along with the minimum wages, but the special allowance is not applicable to industries such as

flour mill, oil mill, road construction, etc. But the same is applicable to power looms, printing presses.

Another point has been put forward regarding minimum output expected of a worker. The Parishad had put up this point also in their charter of demand to the government. But again this aspect has been overlooked. Thus, paying capacity, special allowance and minimum output should be reconciled with the minimum wages recommended.

It will not be out of place to mention, once again, the aftermath of the 1973 Abhyankar Award, also discussed extensively in Chapter 3. The paying capacity was ignored, initially, and thus in Pune in 1973, 12 printing presses went sick and 5 closed down.

(C) The third set of recommendations is concerned with the employers body existing in Pune. The nature of the problems faced by similar firms is found everywhere and thus these recommendations can be projected over all the similar trade associations existing in any part of the country. The Employers' Association can create a monitoring cell to identify the cases of noise pollution and lead pollution caused by the printing units. The study attempted here has revealed that deeper inquiry is necessary to gauge the dimensions of the pollution problem within the industry. A similar cell would maintain a panel of experts, doctors and specialists in industrial health and hygiene

to visit the printing units to check the health of workers, noise levels, ventilation, first aid and other facilities, etc. A follow up in these cases is an important precondition but frequent visits and maintaining proper record will make it an easy job after a certain stage. Another cell which an employer's association can create is that for machine maintenance. The present survey has noted a good deal of cases of loss of work due to failure of machinery. A trained batch of maintenance workers can be of great help to printing presses who do not get timely service of these technicians or who many times carry out the work below expectation. In the interest of members, many tips and practical suggestions can be passed on for improving speed of the machine, extending life of machine, saving on fuel and raw material and ensuring a better quality of the printed product. The same cell may offer consultancy about new types of machinery, spare parts, accessories, etc.

A legal aid cell, if created at the level of the employer's association can resolve issues pertaining to labourers, clients, recovery of bills, etc. Tax management and similar matters can also be looked after by this body. In fact, experts on management and accounting problems can be of immense help to the firms within the industry, and since the industry is predominated by small firms, this

is more true. Easier techniques of better material management, labour management, wastage accounting, tips on how to file quotations and tenders can be beneficial to members. It has been noted in the present survey that the system of incentive wages, with all its limitations deserve a careful trial on the part of firms and the employers organization can help firms in putting this system into practice after carefully scrutinizing all the intricacies of the same. Wells has elaborated one such incentive system in printing firm⁵ and it is not too difficult to modify the same for comparatively smaller sized firms operating in the Indian business environment.

The employers' association can pose a united front vis-a-vis the client body, especially where a united front is essential for mutual talks. It has been noted earlier in the present study that commercial banks and cooperative banks in the city provide a sizeable portion of printing jobs to the firms from the city. But some terms of this transaction do not give a fair deal to printing firms. It was learnt that the banks do not allow any escalation in rates quoted for a period of 12 months from the submission of a quotation or tender. This is to the disadvantage of the printer since escalation is justifiable in the days of rising prices of paper or wages, especially if it is unforeseen. Escalation clause in construction or furniture

is a routine affair but printers feel they are not treated well on this issue. A united body of employers may come to the rescue for the common benefit of members. They can also hold negotiations for shorter trade credit, proper wastage accounting, etc.

An essential precondition for the success of the programme of modernization initiated about five years ago is a continuous supply of trained personnel. Sapre,⁶ more than two decades ago emphasized the importance of this and elaborated how industry was to suffer from dynamism and productivity if training facilities were not strengthened. It was pointed out by him then that the United Kingdom had 120 full time technical institutions offering printing technology against 4 in India and another 10 only partially equipped. The United Kingdom was then incurring an annual recurring expenditure of Rs. 440 lakhs (of which industry contributed Rs. 266 lakhs) and in India the corresponding expenditure was merely Rs. 10 lakhs of which industry contributed nil. In fact India even today has no association devoted to research in printing industry and technology against U.K. having 1, U.S.A. having 8 and U.S.S.R. having 2 institutions. Sapre at the same time⁷ attempted to measure the needs for trained personnel for this industry for the state of Maharashtra. He came out to the estimate of 3,500 personnel to cope up with the expansion and modernization programme and another 700 for replacement purposes, taking

the total to 4,200. Even today the diploma and degree students do not total up to more than 300 approximately p.a. from the state of Maharashtra. The need for trained personnel is sounded often even recently.⁸

The sickness within this industry has been referred to above in this chapter. That was in the context of the phenomenon taken place in 1973 and onwards. The object of the present study was not to go into this phenomenon present at the time of the survey. But certain symptoms can be identified within the framework of the present study. While there is no standardized definition universally accepted about the sickness or situation leading to sickness, some trends of the same can be noted briefly. One approach has been to quantify the capacity utilization of printing units and classifying those units as sick which are using capacity upto 20 per cent or less. The units under study showed a fairly high percentage of capacity utilization (about 85 per cent, taking the average of all the units), the causes of underutilization revealed by the respondents are so common that any unit can go sick any time and early prevention of the same is hard to come about.

Another symptom of potential sickness can also be cited. As noted in Chapter 7, a large number of printing presses took a long time to recover their bill amounts receivable and their funds were locked up for unduly long

duration. The unit which fails to generate its own cash surplus internally and the one which requires continuous external financing shall go sick.⁹ The phenomenon cited here is a symptom which is likely to lead to sickness of this type. The employers' association, if works actively, can monitor the occurrence and prevention of direct and potential sickness within the industry and thus avoid wastage of material and human resource.

Thus, in the sweep of technological changes/ innovations taking place in this industry it has been well established that the future of the industry is certainly encouraging. The industry is predominated by small units and those will be flexible enough to get tuned to new technology, new pattern of demand and the structure of the industry will be more broad based and consolidated than ever before.

NOTES AND REFERENCES

1. Refer to the concept of growth elasticity enumerated in Chapter 1. The concept is also corroborated by the 'Elasticity of Employment' enumerated in Jussawalla and Lamberton (Ed.) : Communications Economics and Development, Pergamon Press, U.S.A., 1982, p.151-155. Alongwith economic development, the coefficient of elasticity of employment is +0.99, in transportation and communications sector, suggesting almost the same rate of growth. The elasticity of employment for all industries is +0.15 only, and for activities such as mining or farming and fisheries it is -0.38 and -0.62 respectively.
2. The Economies of Large Scale Production in British Industry : An Introductory Study, by P.F. Pratten and R.M. Dean, Cambridge University Press, U.K., 1965.
3. The Cost Structure of Printing Industry, by S.A. Sapre, Directorate of Printing and Stationery, Bombay, 1973.
4. Memorandum submitted by Maharashtra Mudran Parishad to the Minimum Wages Committee, Bombay, February 1976.
5. - Productivity in a Printing Firm, by Wells F.A., Gerald Duckworth, London, 1958, Ch. VIII, pp. 76-97.
6. Perspective Planning for Printing Education, by Sapre S.A., Government Central Press, Bombay, 1965, p.5.

7. Op.cit., p.7.
8. For instance an article entitled, "Printing Industry in Doldrums" reproduced in Mudra, Vol. XIII, No.10, July 1985.
9. These definitions have been given by the studies carried out by various agencies. Two such studies are by the State Bank of India (1975) and Reserve Bank of India (1976) respectively. Quoted in Organization and Management of Small Scale Industries, by Vasant Desai, Himalaya Publishing House, Bombay, 1979, p. 535.

Printing Industry in Pune

QUESTIONNAIRE

Date :

(A) General Information

1. Name of the Printing Press

2. Address

Phone No.

3. Type of Business Organization?

(Tick the appropriate form)

Proprietorship

Family Partnership

Partnership

Cooperative Society

Private Limited Co.

Public Limited Company

Public Trust

4. Year of Establishment

5. Mode of acquisition of the present business. (Tick)

Started by the owner

Purchased

Inherited

Leased in by the present owner

Any other (Specify)

6. Name of the owner/main partner/manager
of the printing press

7. Type of business carried out by you? (Tick)

A. Composing

B. Letterpress printing

C. Photocomposing

D. Platemaking

E. Offset printing

F. Lithography

G. Electronic Typing

H. Screen printing

- I. Type Foundry J. Block Making
 K. Binding L. Publication
 M. Any other (Specify)

8. Educational and professional background of press managers/owners.

1. Formal training in printing : Degree or Diploma
2. Experience (without formal training)
3. Any other degree or diploma.
4. S.S.C. with no experience
5. Below S.S.C. with no experience
6. Illiterate with no experience.

9. Nature of business premises. (Tick)

- Owned Ownership
 Rented

10. Area in sq.m. (Specify)

11. Nature of construction of your premises.

- Pucca Old
 Iron sheet and wooden construction.

12. Your business year.

(B) Labour

1. Total No. of workers and staff members of all categories.

2. Category Skilled Semiskilled Unskilled
- Compositors
- Printers, etc.

Binders

Other technical staff

Administrative and
establishment staff

3. Specify Male/Female/Child in the categories noted in B.2 above.
4. Specify the nature of employment :
Permanent / temporary / contractual and piece wage
in the case of workers - categorywise
pertaining to information contained in
B-2 above
5. Average amount of salary and wages
drawn by workers - categorywise
pertaining to information contained in
B-2 above
6. Percentage of contractual and piece
wages paid by you out of total wage
and salary bill
7. Average duration of employment of
contractual and piece rate workers
8. What advantages do you realize of
this system? (Specify)
9. Disadvantages experienced by you
of this system. (Specify)
10. Mode of recruitment of workers. (Tick)

Through Employment Exchange	Giving advertisement
Through acquaintance	By interview
Through middleman	After giving trial
11. How many of your workers are
members of the Trade Unions?
12. Have you experienced any strikes/
lockouts/gherao/stoppage of work, etc.
in recent past?

13. Causes of them.
14. Method followed for resolving the dispute with labourers. (Tick)
- | | |
|---------------------|--------------|
| Mutual negotiations | Labour court |
| Arbitrator | |
15. Nature of mechanical failure and subsequently stoppage of work. (Specify)
16. Any other causes.
17. Problems you face about skilled workers. (Specify)
18. Problems with unskilled workers. (Specify)
19. Any accident occurred in your press recently.
20. Do you have first-aid provision? Yes / No
21. Medical facilities available at your premises (Tick)
1. Medical check-up
 2. Medicines when required
 3. Medical help
 4. Medical check-up at the time of appointment
 5. Any other
22. Specify any particular disease you have noticed among your workers :
- | | |
|-------------------------|--|
| Nature of disease | |
| No. of persons affected | |
23. How many of your workers are alcoholic?
24. How many of your workers have double employment?

25. What is the probable proportion of labour turnover you experience?
26. Causes of labour turnover :
1. Search for higher wages
 2. for job satisfaction
 3. poor work facilities
 4. stability
 5. Any other (specify)
27. Mode of promotion practised by you.
28. Non-cash benefits provided by you to workers and employees
1. Uniform
 2. Transport
 3. Free tea
 4. Annual trip
 5. Any other (specify)
29. Do you use incentive system of wages?
If yes, of what form?
30. Nature of bonus paid by you.

(C) Economic Performance

1. Total value of productive capital (market price) employed by your press.
2. - do - (as per book value)
3. Net annual turnover of printing presses
4. Break up of annual turnover categorywise
 1. Paper, raw material, etc.
 2. Wages and salaries
 3. Transport and maintenance

4. Postage, office expenses, telephone, etc.
5. Interest, depreciation, rent, contingencies, etc.
6. Profit.

(D) Business Performance

1. No. of Bank accounts maintained by you.
2. Why do you maintain more than one bank accounts? (Specify reasons)
3. Nature of printed product brought out by you.
4. Language-wise outturn of your printed product.
5. Have you realized any change in the market for printed products in the last 5 years?
If so, of what type? Specify.
6. Do you specialize in any form or the other as far as your output of the printed product?
What makes you specialize in a certain product?
7. According to your own assessment, do you hold a monopoly of any printed product?
8. What objectives do you try to pursue in your business?
(Specify your order of preference)

1. Maximum profits
2. To get steady incomes
3. To keep machines going
4. To maximise business
5. To try continuous expansion
6. To seek improvements
7. To meet monthly bank liability
8. To survive in business
9. To minimise cost of production

10. To provide high quality product in market
11. To seek job satisfaction.
9. Do you solely depend upon printing as a source of your livelihood?
10. If your answer to above is negative, what is your side activity?
11. Is it related to printing industry or not?
12. What makes you take up any side activity?
13. What price do you charge for a specific printing job for composing printing by letterpress process?
14. Which method do you follow while fixing up rates for printing service you render? (Tick)
- | | |
|----------------------------------|--------------|
| Traditional | Ad hoc |
| Measuring, time, material labour | Negotiations |
| Any other method (specify) | |
15. Do you give out any of your annual output on the sub-contracting basis?
- Approximately how much percentage?
16. If your answer to D.15 above is positive, specify causes as to what makes you resort to this practice?
17. How much part of your production capacity is utilized?
18. If your production capacity is underutilized, what are the causes according to you? (Tick)
- | | |
|--------------------------|----------------------------|
| Labour! Problems | Technical Problem |
| Insufficient demand | Paucity of capital |
| Shortage of raw material | Any other reason (Specify) |
19. What are the constraints, according to you on expansion and diversification? (Specify giving order of your preference)

20. What is your experience about raw material? Specify
21. Do you practice any techniques of improving productivity and efficiency? Specify.
22. Do you depend upon any one client for obtaining printing business? To what extent?
23. Have you retained any big client or a few big clients for long? If yes, how long?
24. Do you experience job rejection? To what extent?
25. What according to you is the cause of job rejection?
26. Do you have separate arrangements for proof reading?
27. Do you obtain any of your business by filing tender?

If so, what is the approximate percentage of this business in your total annual business?
28. What is your experience of such type of business? Specify.
29. Do you recover your bill amounts in advance? or cash on delivery? or any trade credit is allowed? If credit is allowed, of what duration on an average?
30. Your clients hail from which area? (Tick)

Close to your premises.	Within city area
- Suburbs	From out of Pune
31. Are you member of any trade organization/s? Name it/them.

32. If yes, do you attend their meetings
- | | |
|------------|-----------------------|
| regularly? | Frequently |
| rarely | Do not attend at all. |
33. Do you derive any benefit from your membership of trade association/s?
- Specify the nature of benefits.
34. If you are not a member of any of trade associations, specify the cause/s of it.
35. Do you receive any sort of feedback from your employees?
- If yes, do you accept it and put it into use?
36. How do you claim orders? (Tick)
- | | |
|------------------------|-----------------------|
| Give advertisements | File tenders |
| Personal visits | Through acquaintances |
| Through intermediaries | Any other (Specify) |
37. What do you feel about laws applicable to printing industry?
- Specify your reactions.
38. Are you optimistic about future in this business?

Thank you.

GLOSSARY

Aniline Printing : An alternative term for flexography.

Ascenders : The strokes of letters which project above the level of x, such as b, d, f, k, l.

Body (of an ink) : The consistency of ink used in printing.

Bold type : The heavier or stronger version of a type face used for emphasis. It is indicated on copy by a wavy underlining of words to be set in bold.

Bond paper : A medium-weight paper of about 70 to 80 gsm. Commonly used for letterheads. In India, the same is commonly available under the names such as Sunlit bond, JK bond or Crystal bond.

CRT - (Cathod Ray Tube) : A display tube used the photocomposing processes.

Calendered paper : Paper passed through steel rollers to give it a smooth surface.

Chase - A large metal frame wherein a flat letterpress printing surfaced is locked, which later on is used for printing.

Collating : The operation which follows the folding process. In collating the sheets or folded forms are gathered in sequence, which is subsequently sent for binding.

Composing : A term borrowed from letterpress printing technique. It suggests the assembly of type in accordance with the

text supplied, after following the instructions provided along.

Copy : The manuscript or typescript which the printer is required to set.

Demy : A standard size of a paper measuring 17.5" x 22.5" to be single demi or sometimes 18" x 23".

Descenders : The strokes of letters which fall below the level of x height of type face; such as g, j, p, q, y.

Direct impression : Obtaining a print by pressing the surface of the printing stock against paper or any other surface.

Distribution : Returning type to its proper compartment in the case.

Dryers : Chemical in paste or liquid or powder form added to ink to ensure more rapid drying.

Dummy : The term used by printers when blank pages of correct size and number are made up to indicate what a job will look like when completed. A dummy copy of a book is also handy to try the jacket or cover on.

Editing systems : A machine with a cathode ray screen and a key board, used for making changes or amendments for a correct copy.

Electrophotographic printing : Technical term for xeroxing (plain paper copiers are more popular in xerography.).

Electrostatic printing : Also suggests xeroxing - of the coated paper copier type. This type is less popular.

Em - A measure used by printers. It is one-sixth of an inch, i.e., about 0.42 cm., e.g., If the printed letter should be one-ninth of an inch, it is referred to as 8-point size. If the width of the printed matter - say column or a page is 4 inches, it is referred to as 24ems.

Flat-bed machine : A printing machine carrying a flat printing surface, e.g., treadle machines.

Folio : A sheet of paper folded in half to make four pages. Thus crown folio is 15" x 10". The page numbers are termed as folios.

Form (e) : The total relief printing surface made up of composed material and blocks used for printing. In terms of pages in the use of a book, it means the total printed matter of 16 pages or 24 pages.

Fount of type : A set of type. Depending on the frequency of characters that occur in written language, the letters are provided, e.g., 'e' is used most in language and 'z' the least.

Furniture : Wood and metal used to fill up any substantial blank spaces.

Galley : A metal tray used for holding letterpress type and blocks.

Galley press : A simple proofing press used to get a proof print of the material held in a galley.

Grammes per square metres : The standardized method of expressing the weight of a paper sheet. (GSM)

Half Title : A page generally preceding a full title page, showing simply name of a book.

Half tone : A type of blocks used for printing photographs.

Height : The standard height of a type is .918". British measurement.

Imprint : Printer's name and address, usually printed in small type.

Intaglio : The printing process which prints from images which are recessed into the plate, e.g., photogravure plate.

Italic : A variation of typeface that slopes to the right. It is usually used while adding emphasis. This was invented by an Italian printer by the year 1500.

Justification : Spacing lines of types in composing so that all are of the same length.

Layout : A rough visual indicating how the type and other matter is to be set out on the page.

Leader : A type character having 2, 3 or 4 dots in a line, such as ... or

Linotype : A mechanical method of type composing, this produces

· solid lines of types as against single characters.

Make ready : All the operations carried out on production machine from receipt of the job to the start of the print run.

Measure : The width of a line of print. This is measured in ems.

Monotype : A mechanical method of composing type. This uses a key board and a casting unit. Perforated paper spool is used for casting individual characters.

Multicolour machine : A machine which prints two or more colours on a paper in one pass through a machine.

Offset printing : A printing process using an intermediate surface on which the printing surface itself is pressed to transfer image which is subsequently transferred to printing stock.

Perfecter Machine : A machine that prints on both sides of the paper when it passes through the machine.

Pica : Name for a 12-point type.

Planography : Printing on a plane surface, e.g., lithography.

Point : A basic unit of printers' measure equalling 0.351 mm. or 0.013837 inch.

Proof : A trial print of composed type, usually taken on newsprint sheet. Correction marks are indicated on either side of the printed material.

Quire : The one-twentieth part of a ream of 500 sheets, i.e., 25 sheets. In the case of old British measurements, it meant 24 sheets in a 480 sheet ream.

Register : The term denotes accurate position. In colour printing it means, accurate printing on the original image to avoid fuzzy edges.

Retouch : To improve or make corrections on artwork or negatives.

Rotary Machine : Printing machine with both the impression and the printing surface forming part of the surface of cylinders. The paper passes between two cylinders to register the printed image.

Separation or colour separation : Breaking down a colour original into the three primary colours : magenta, cyan and yellow, by photographing the original through a set of filters.

VDT (Visual Display Terminal) : Equipment used in modern techniques where a cathode ray display screen is available, matter can be edited and checked on this screen.

Web Fed printing : Printing on continuous reels or webs of paper, such as newspaper printing.

Xerography : A printing system which uses an electrostatic charge to produce a print. The word xeroxing suggests the use of xerographic process.

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