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CHAPTER FIVE

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AN EMPIRICAL ANALYSIS AND INTERPRETATION OF DATA

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CHAPTER FIVE

AN EMPIRICAL ANALYSIS AND INTERPRETATION OF DATA

In the previous chapter the costing system in the selected printing press that is Government Sector, Co-operative Sector and Private Sector were studied briefly and obtained the information through questionnaire. It is writely to note that the Government press is adopting costing method that is Average Unit Costing, which is not a very scientific system. Under this costing system total number of units is procured from the record and the total expenditure is divided by these units. This only meets the receipt of grant and payment of expenditure or preparing budget which required to be submitted to the State Government. The other presses under our study have no costing system so far.

This chapter analyses the data procured through questionnaire to study the costing system and the installation in the press. The details of various presses are compared and the most appropriate system is identified. The difference between theory and practice if any would be brought out in the analysis. A comprehensive system that can be adopted and maintained easily is attempted to be designed. Whatever the information obtained through questionnaire from the press that is published data. This published data give for the study external analysis and the hidden data is not obtained for internal analysis.

The following aspects of cost information is analysed to study costing system to be installed and reviewed in this chapter.

Establishment
Capital Investment
Legislation
General Administration
Material Procurement
Departmental Information
Machinery
Depreciation Policy
Emoluments of Staff
Overheads

5.1 ESTABLISHMENT ASPECT ANALYSED AS FOLLOWS :

Government Printing Press : It is established in Kolhapur City in the year 1930. This is firm of Government organisation. The object of this establishment is to print the forms and matters required by Government. The nature of the press is letter press. This establishment is classified as a large size organisation according to the investment criteria, that is more than 10 lac. The press has an object to give the service the Government and not commercial printing.

Shetkari Sahakari Sangh Press : It is established in Kolhapur City in the year 1961. This is Co-operative Organisation. The object of this press is to print the forms and matters required by Government as well as outside customers. The nature of this press is letter press. This establishment is medium size organization according to the investment criteria, that is less than 10 lacs. This press gives service to its mother organisation as well as

to accept the printing work of customers from outside.

Ghatge Patil Pac Printers Private Ltd. : This press is established in the year 1970. This unit is of private company sector. This is purely commercial organisation and its object is of profit making. But the policy of the directors seen from the Annual Report seems to show less profit or loss. This is a medium size organisation according to investment criteria. This press is established on commercial basis. Hence, its object is to profit making. The nature of the press is letter press as well as offset press.

Rajhans Printing Press : This press is established in the year 1966. This is private partnership organisation. The enterprise concern is established to do the business on commercial base and achieve the profit from printing activities. The nature of the press is letter press and offset. The size of the press is medium as per the investment criteria. The main object of the press is to make profit from the business. This form of business has purely a commercial base and carrying the business to the best satisfaction of the customers.

5.2 CAPITAL INVESTMENT ASPECT ANALYSIS :

The capital structure of the selected units is studied and it is observed that this capital investment is of variety in nature. The capital is of different of these units. Government Sector has capital in the form of Grant from the Government. Co-operative Sector has its share capital and loan capital. Private Sectors

has its share as well as borrowed capital. The capital investment is classified in the following table.

TABLE NO. 1

CAPITAL INVESTMENT

Name of the Press	Fixed Capital	Percentage to Govt. Investment	Working Capital	Percent to Govt.
Government	50,15,000	00	6,20,000	00
Co-operative	4,05,000	8	1,04,000	17
Private Co.	20,20,000	40	1,50,000	24
Partnership	9,22,000	18	1,15,000	18

Note : Comparative statement on the basis of Govt. Sector Investment.

This study of capital investment analysis is made as government sector investment is taken as a base investment analysis shows that investment of capital both fixed and working is very low in Co-operative as well as in the partnership sector.

The working capital of the Government Sector is, though, interest free it is to be considered for costing the job as it is loaded with interest. The co-operative as well as private sector working capital is borrowed and hence they have to consider the interest to be payable. It is clear that the percentage of capital investment of co-operative and private sector is very low compared to the Govt. Sector.

5.3 LEGISLATION :

The printing industries are governed by the Act of Maharashtra State which are passed from time to time. The printing industry is labour oriented and hence in the interest of labours the various acts are framed and passed in the Legislature. There is no exception to the Act passed by the Government. The main acts which govern the printing press are as follows :

1. Factory Act, 1948
2. Minimum Wages Act
3. Workmen's Compensation Act
4. Bonus Act
5. Provident Fund Act
6. Shop Act
7. Maharashtra Civil Services Rules

These acts are framed in the interest of the workers to avoid the exploitation of their services. The minimum provisions are laid down in these act. If any concern gives more and above the provisions the act do not play any role. But if there are discripencies in the facilities provided to workers the proprietor of the concern is liable to fine or punishment. From the point of legislation it is very clear that all the provisions laid down in the Act should be followed by the press. These Act covers the working condition, leave, holidays, safety, protection, frindge benefits, wages, compensation in case of accident, incentive that is bonus, savings for future, and service rules regarding promotion, recruitment and retrenchment etc.

5.4 WORKING CONDITIONS :

It is essential to study the working situation of the worker in the press i.e. the workers working in the press, the days, number of hours per day, holidays, holidays with pay, absenteeism any other benefits given to workers. With this information it will be possible to know the working conditions in the press so as to calculate the labour cost per hour.

The press is labour oriented job and labour cost in this industry has much importance. So the computation of working days, working hours, mandays, will make easy to calculate the labour hour cost. The comparative study is made in the following tables.

TABLE NO. 2

ANALYSIS OF WORKING DAYS AND HOURS IN A YEAR

Name of the press	Working days exclusive of paid weekly off & holidays	Working hours in	Total working hours in a year
1. Government	300	8	2400
2. Co-operative	300	7.1/2	2250
3. Private Company	305	7	2135
4. Partnership	305	8	2440

From the above analysis of working days and hours it is studied that the number of days and number of working hours are more or less similar in the printing industry as these presses are covered under Factory Act, 1948. Leave with pay and idle

time are treated as productive hours and hence no separate record is maintained to record idle hours or time. It is also studied that no time keeping method is adopted but for recording time a muster or in some presses time card is maintained.

Time booking is made by the worker by their own hands under the supervision of foreman. Normal and abnormal idle time is not recorded by the presses. Also any abnormal loss in material and time is also not recorded. The reasons of abnormal idle time such as break down of machinery, power failure, accident, shortage of power, strike, lockout or any other are not considered and accounted for. In all presses under study the time rate system is used for payment of wages. But for improving the working conditions presses pay incentive to the workers in the form of bonus. Generally these presses do not pay overtime allowance.

It is also studied that in a calendar year, every worker enjoys one weekly off, casual leave 15 and public holiday, also sick leave allowed on the recommendation of doctor of Employees' State Insurance Scheme which is allowed as per the Factory Act 1948.

TABLE NO. 3

ANALYSIS OF MAN DAYS IN A CALENDER YEAR

Printing Press	No. of days in a year	Composing		Printing		Binding	
		No. of Employ-ees	Total Man-days	No. of Employ-ees	Total Man-Days	No. of Employ-ees	Total Mandays
1. Govern - ment	300	42	12600	35	10500	61	18300
2. Co-opera- tive	300	9	2700	5	1500	3	9000
3. Private Co.	305	14	4270	15	4575	13	3965
4. Partner- ship	305	12	3660	7	2135		1830

TABLE NO. 4

ANALYSIS OF MAN HOURS IN A CALENDAR YEAR

Printing Press	No. of hours in a year.	Composing		Printing		Binding	
		No. of employ-ees.	Total Man hours	No. of employ-ees	Total Man hours	No. of employ-ees.	Total Man hours
1. Govern-ment	2400	42	100800	35	84000	61	146400
2. Coopera-tive	2250	9	20250	5	11250	3	6750
3. Private Co.	2135	14	30298	15	32025	13	27755
4. Partner ship	2440	12	29280	7	17080	6	14640

The above analysis should be studied for the working positions and man power utilisation in the printing industry. The comparative study of manpower shows the difference between the volume of man power which effects in raising the cost. As the workers are employed as per the requirement of work and there is no man power planning in the press which affects the productivity of the organisation. If the costing system is adopted the study will definitely reveal the deficiency in efficiency of the press and will find out the definite solution to how they will achieve more better position in the market.

5.5. MATERIAL PROCUREMENT :

Material constitutes main element of cost. Material is accounted for as a major element of cost. This material is considered as a direct material.

This should be studied as how the press work is costed for with this direct material. It is studied that the press work is mainly labour oriented that means 60% cost is of labour cost. The only direct material is paper and other material like oil, grease, cotton waste and printing ink is small consumable in quantity so they are to be taken into account as overheads. So this paper as a material is to be studied with reference to the presses which we have taken for study.

While costing the material, the expenditure which actually incurred on purchasing the material and octroi carriage is also considered. This means the actual purchase price based on quantity required is charged for costing purpose. For the procurement of material cost a proper store keeping record is to be maintained and on issuing the material for job the cost is calculated for material. Hence, a proper store keeping record such as store ledger, bin card, issue register are to be maintained up-to-date.

The store keeping and store accounting formulates the cost of material. Also inventory control system reduces and increases the cost of product. Hence, for material procurement a systematic store keeping and pricing of issues is to be carried out correctly. Hence, the units under our study are to be studied as to whether they have a proper store keeping system and pricing of issues. It is observed from the information through questionnaire that not a single press is adopting the procedure of store keeping and pricing the material as requirement of costing system.

The information obtained from the presses is studied and it is observed that for purchasing the store the authority is not delegated separately to the Purchase Manager. The owner in private concern and Press Manager in other organisation carries the work of purchasing. Hence it is quite clear that the purchasing of material is in small quantity, it is made from retailer purchases are not made on requisition. Material is purchased as and when required and also as per job specification. As the material is purchased in small quantity there is no receiving and inspecting department. The payment of purchases is made on cash or credit basis. It is also observed as there is no systematic store keeping hence stores location and layout are not prepared. There is no classification and codification. There is no system of store centralisation and decentralisation. But for accounting of store material only store ledger is maintained and no other document like bin card, material abstract are prepared. Stock levels such as maximum, minimum ordering danger optimum are not maintained. The purchasing on economic order quantity method is not done but the purchasing is made as per need of the department.

The issue of store material is made on requisition slip. For pricing the issues no method as mentioned in costing LIFO, FIFO, weighted average etc. are used and hence the question of pricing the material is not considered by these press. At the end of the year the stock taking is done and the physical varification and store account record is tallied and with the help of the store ledger record the quantity and value accounts are prepared.

As there is no proper store keeping and no purchasing method is adopted there may arise likeage, shrinkage, wastage, pilferage, fraud theft which may cause in increasing the expenditure on maintainance and also affects the profitability. Quality of the work may not improve. Hence it is very essential to have proper purchasing and store keeping systems in scientific manner to reduce the cost of printing work in the long run.

5.6 DEPARTMENTWISE AREA AND ELECTRIC POINTS :

It should be studied for costing the expenditure incurred on running the various activities in completion of job. For productivity purpose the expenditure which is called overheads is classified as fixed and variable overheads and these overheads are allocated and absorbed for particular cost centres or cost units. In the printing press the job costing system is adopted and hence the expenditure incurred i.e. overheads allocated and absorbed jobwise in each department. For this allocation and absorption the basis are ascertained and accordingly the expenditure incurred is allocated and absorbed to a particular job. In view point of this, the information is gathered, through questionnaire of various departments.

In each of the press under our study the departments are in existence as 1) Administration Service Department 2) Proof Reading Service Department 3) Composing - Operating Department 4) Printing Operating Department 5) Binding - Operating Department 6) Material and Store Department - Service Department 7) Packing and Service Department. The cost of operating department is absorbed and allocated on hourly rate basis while the cost of service department is absorbed and allocated on percentage basis. Every costing system involves the proper allocation and absorption of overheads to reach

the appropriate valuation of costing the expenditure. Hence this information is collected from the presses on actual measurement and counting, so that the reliable information will give correct results of adoption of job costing method.

It is observed from presses under our study that there is no proper record maintained to seek out this information hence physical efforts are made to find out this information. These presses do not apply any method of absorption and allocation of expenditure. The expenditure incurred on service department is also not absorbed and allocated on degree basis. But this information is collected for our study in adoption of costing system.

For absorption and allocation of these overheads, mainly there are two bases 1) Hourly rate 2) Degree of activity. Hourly rate base is used for operational expenditure and degree base is used for service department. In the printing press under the study, there are three operational departments 1) Compose 2) Printing 3) Binding and four service departments 1) Administrative 2) Proof Reading 3) Material and Store keeping and 4) Packing and Despatching.

Hence according to costing system the overheads are classified and charged to the particular job. For allocating and absorbing the operational expenditure. The departmentwise consumption of units are to be taken into account and the floor space area is required for allocating and absorbing the expenses of service department. Therefore the information sought from various presses is classified as under.

TABLE NO. 5
ANALYSIS OF AREA OCCUPIED BY THE DEPARTMENTS

Department	Government	Cooperative	Private Company	Partnership
1. Administration	2540 sq.f.	200 sq.f.	1000 sq.f.	180 sq.f.
2. Proof Reading	500 sq.f.	-	-	-
3. Compose	3070 sq.f.	800 sq.f.	200 sq.f.	1200 sq.f.
4. Printing	2000 sq.f.	900 sq.f.	2000 sq.f.	300 sq.f.
5. Binding	1300 sq.f.	200 sq.f.	750 sq.f.	300 sq.f.
6. Store	3500 sq.f.	-	400 sq.f.	-
7. Packing and Despatching	150 sq.f.	-	-	-

TABLE NO. 6
ANALYSIS OF ELECTRIC POINTS FIXED IN THE DEPARTMENT

Department	Government	Cooperative	Private Company	Partnership
1. Administration	15 pts	2 pts	20 pts	6 pts
2. Proof Reading	12 pts	-	-	-
3. Composing	64 pts	4 pts	14 pts	10 pts
4. Printing	46 pts	6 pts	27 pts	14 pts
5. Binding	31 pts	3 pts	15 pts	4 pts
6. Store	16 pts	-	6 pts	-
7. Packing and Despatching	-	-	-	-

From the above tabulation it is studied that the degree of expenditure on service department to be allocated, absorbed for which area of each department is necessary and actual consumption of electricity to be sought out for each job from points fixed in each department. Therefore this information is more useful for absorption and allocation of expenditure of a particular job.

5.7 CLASSIFICATION OF MACHINERY AND HORSE POWER :

This should be studied for costing the expenditure incurred on account of running the machine per hour. For calculation of machine hour rate of any operation the specific information is gathered from the presses under the study. We should know the type of printing machine, its impression rate per hour and power consumption per hour. From the above information it is easy to cost the particular one. Also it will be suitable to classify the job according to the size of the job so that it should be economical to print the job on proper size of machine. If a small size job is printed on big size machine, it will be uneconomical and also will increase the cost of the job. The big job in number of copies will be economically printed on automatic machine, while small job in number of copies will be economically printed on hand-fed machine. For taking such type of decisions related to cost reduction, we should know the types of machines existing in the press. So that the job will be fed to appropriate machine which will reduce the cost of printing.

The information regarding type of machine, number of machines, rate of impressions per hour, floor space occupied by the printing machine within the area of printing department, and horse power

required to run the machine . The classification of this information is made as under.

TABLE NO. 7
ANALYSIS OF PRINTING MACHINERY

Printing Press	Machine	Type	Number	Impression per hour	Space occupied	Horse Power
1. Government	Tradle	Hand Feeded	2	1000	4' x 6'	One
		Automatic	4	4000	4' x 6'	One
	Cylinder	Hand Feeded	2	1000	6' x 10'	Three
		Automatic	7	4000	10' x 18'	Five
2. Cooperative	Tradle	Hand feeded	2	1000	3' x 4'	One
		Automatic	1	4000	3' x 4'	Two
	Cylinder	Hand feeded	1	1000	6' x 10'	Three
		Automatic	1	4000	6' x 10'	Five
3. Private Company	Tradle	Hand feeded	1	1000	4' x 6'	One
		Automatic	2	4000	4' x 6'	Two
	Cylinder	Hand feeded	1	1000	8' x 15'	Three
		Automatic	5	4000	12' x 15'	Five
4. Partnership	Tradle	Hand feeded	3	1000	4' x 6'	One
		Automatic	-	-	-	-
	Cylinder	Hand feeded	1	1000	6' x 8'	Three
		Automatic	3	4000	6' x 10'	Five

This analysis should be studied for absorption of and allocation of overheads incurred on calculation of machine hour rate. The impressions of printing press are calculated on this basis. Therefore for costing the overheads the use of machine and power consumed in unit is calculated on this basis.

5.8 DEPRECIATION POLICY :

This should be studied as whether these presses are charging the depreciation and it is accounted for costing a job. Also it is to be studied the assets are shown in the books of account in the depreciated value.

It is observed from the books of accounts of Government press and Ghatge Patil Press that the depreciation charged is accounted for and assets are shown in the depreciated value. But the remaining presses do not follow the correct depreciation policy. The private company is charging the depreciation at the highest rate to show the minimum profit or sometimes loss so as to avoid complications of laws. The Government press adopts very reasonable policy of charging the depreciation towards the job.

But it is observed that while costing the job the depreciation value is not considered to calculate machine hour rate as they do not follow any systematic costing system.

The Government press is adopts the straight line method to charge the depreciation on assets, while other three presses adopting reducing balance method to charge the depreciation.

TABLE NO. 9
ANALYSIS OF DEPRECIATION RATES

Depreciation	Building	Machinery	Furniture	Other Assets
1. Government	8%	10%	8%	20% Transport equipment
2. Cooperative	Rented	20%	10%	-
3. Private Company	Rented	33.1/3%	15%	-
4. Partnership	10%	33.1/3%	10%	-

From the above analysis it is seen that no uniform policy is adopted in the printing press. Depreciation is charged against the profit and loss A/c hence policy of the industry is very conservative. More or less the private printing industry has same policy in charging the depreciation.

5.9 STAFF EMOLUMENTS :

This should be studied to know the labour cost of the printing industry. Where labour cost is the major part of cost that is 60%. Hence this study reveals the position of press whether it is sound or not. But it is very difficult to obtain the information about the emoluments. This information is collected from the books of accounts of the press. These figures are totals of various departments in a year.

In costing the job, the labour cost is second important element. According to the study it is observed that the figures of emoluments are not considered while calculating cost., but for calculation of labour cost. It is very essential to collect the information of

emoluments. The allocation and absorption of this expenditure is made on this basis and also for calculation of machine hour rate and labour cost of composing section. The expenditure incurred on salary is necessary to be known.

TABLE NO. 10

ANALYSIS OF STAFF EMOLUMENTS

Department	Government		Cooperative		Private Co.		Partnership	
	No. of Employ ees.	Total Emolu ments per annum	No. of Employ ees	Total Emolu ments per annum	No. of Employ ees	Total Emolu ments per annum	No. of Employ ees	Total Emolu ments per annum
1. Admini- strative	37	492980	2	30000	12	180000	3	33600
2. Material Store	-	-	-	-	-	-	-	-
3. Composing	42	471900	9	123200	14	126000	12	115200
4. Proof Read- ing	19	316390	-	-	1	10800	1	7200
5. Printing	35	536840	5	78000	15	180000	7	67384
6. Binding	61	927000	3	43200	13	118300	6	46632
7. Packing & Despatching	-	28730	2	28800	-	-	-	-
8. Maintenance	-	-	-	-	-	-	-	-

From the above information in connection with the total emoluments of various departments, it is observed that the correct information regarding the emoluments may not be sought but somewhat to reach our objective of costing the work the information obtained may be fruitful for our study purpose.

Analysis of total emoluments should be studied for costing the manual operations at various levels in each press. The departmentwise classification of persons and their emoluments show the labour cost of operating department and degree of service department. But so far as hour relates to costing the job in each of different sector's printing press it is observed that there is heavy expenditure incurred on service department than that of operating department in Govt. sector, where as in the commercial and co-operative sector the salaried and wages expenditure is more on operating department and less on servicing department.

This analysis shows that the capacity of carrying the work of printing press is different in all respect but as for costing purpose the total cost per job may not differ at a high degree. This is because the work carried out at high emoluments is of huge nature which gives high returns to the business concern. Because this concern is owned by the Government and it has its own work whereas other presses are dependent on the outsiders or customers work which is uncertain and uneven. So they cannot may high expenditure on total emoluments of permanent nature. But as and when require, the other sector employs the temporary labour on daily or weekly wages. These wages paid by the press are not shown in the above analysis.

This is the conservative policy of every business concern so from the available information through questionnaire and available record the information is analysed for the study.

Staff emolument is considered to be a labour cost plus cost of service. This cost comprises of the cost of printing which is 60%

in the printing industry. That is why the printing industry is job oriented. This means major portion of the cost of production is that of labour cost. Hence it is very acute point to utilise labour at its productive capacity. For this man power planning is very essential to achieve the accurate results of productivity. But it is observed in our study that the presses under study do not have man power planning, but they are meeting the requirements of labour which increase cost of production which affects the profitability of the business. This is studied as follows :

It is studied that the press has various departments which are divided into two groups namely; service and operation. The staff emoluments of service departments are indirect cost and absorbed on degree basis. While the staff emoluments of operative departments are direct cost and allocated to the particular job.

Government Printing Press : It is studied that the total staff emoluments of service department is Rs. 8,38,000/- and of operative department is Rs. 19,86,000/-. The analysis shows that the operative cost is double the service cost. This shows the proper proportion of cost structure. But it is observed that though staff is appointed in the press proportionately, the production rate is not upto the mark because this press is of service motif and no incentive plans are implemented in the press to increase the production. Therefore man-power is not utilised at its utmost productive capacity. As the labour or employee becomes more and more serious he becomes indifferant to his work. The tendency of avoidance of work or slow in work increases in Government press. This causes discontent amongst other hard working employees.

Co-operative Press : It is studied that total staff emoluments of service department are Rs. 58,800/- and of operative department are Rs. 2,44,400/-. This analysis shows that the operative cost is four times more than service cost. Looking towards the cost -- structure of department, it is seen that operating cost is more than the service cost i.e. the cost structure is production oriented. But it shows that working of the press is not planned and hence some operative departments remain idle for want of work which increases the total cost of the job or press. In absence of man power planning, the working of the press suffers from production difficulty. But this press is service motive and hence the profitability is not considered as compared to commercial presses.

Private Sector : Ghatge Patil Pac Printers Pvt. Ltd. It is studied that the total staff emoluments of service department are Rs. 1,90,800/- and of operative department are Rs. 4,24,300.00 This analysis shows that the operative cost is twice the service cost. This cost structure is in proportion of productivity and manpower planning. The administrative department is carrying out the responsibility of getting the work done in scheduled time and to the best satisfaction of the customer. This press is run on commercial basis and its main objective is to earn more profit. With this intention the official staff and supervisory staff look towards the productivity. But it is studied that the operative cost is low because of low salary to the workers and under employment which affects the productivity. The workers concentrate on quality and not on quantity. This press has no man power planning and hence the cost of the job increases. But this press has not adopted costing system but pricing the job at high rate. This press does qualitative work hence it is in

existence but it is in loss as shown in Annual Report of 1987-88.

Rajhans Printing Press : It is studied that the total staff emoluments of service department are Rs. 43,800/- and of operative department are Rs. 2,29,216/-. This analysis shows that the emoluments of service department is 1/5th of the operative total emoluments. This study shows the labour cost is five times more than the service cost. This press is in this way very keen to achieve productivity at low cost of service department. The labourers and workers are paid according to their efficiency of production. This press was established on commercial basis and hence to achieve this object the working partners carry the whole responsibility of administration. Both the working partners have long standing experience and the service department expenditure is reduced and under efficient control the production is increased.

It is observed that the administration is done by two working partners which will not be long standing because that will end with their outgoing after some days. That means there is no man power planning properly. By reducing cost of establishment the printing charges are reduced or charged competitively. But it is quite impracticable to adopt costing system in private concern because it is their firm opinion that cost department will increase their establishment expenditure and additional recording cost. But this belief is not proper as the any costing system regularise the proper way of production and channelise the work without any delay and waste of time and energy which economic the productivity.

5.10 Analysis of Overheads : This should be studied for its

impact on formulating the cost of job under production. Productivity more or less is dependent on these expenditure and also profitability of the business is also dependent on the overheads. Hence it is studied that maximum overheads will increase the cost and minimum overheads will decrease the cost. This shows effect on decrease in profit and increase in profit.

These overheads may be direct or indirect but these cause smooth running of the business. The overhead cost is that indirect portion of total costs which is the aggregate of indirect material costs, indirect wages and indirect expenses. The overhead forms a class of cost that cannot be allocated or absorbed but can only be apportioned to cost units. It is studied that the overhead cost which is not allocated to cost centre or unit but it is incurred to complete the production process. In other words it can be said that the indirect expenses or overhead are essential to complete the production cycle. Hence it is very essential to study the overheads of the press under the study.

The overheads are analysed and classified to compute the cost of the job. These overheads may be classified function wise, behaviour wise or timewise. But we have to see the overall absorption of the overheads to the cost centres.

The classification of overheads shows the distribution of expenditure departmentwise, so the costing of job can be made easier. The absorption of overheads can be made under suitable cost units or cost centres.

The information of various overheads gathered through questionnaire is analysed as follows which will make us to attribute the overheads to the job.

TABLE NO. 11
ANALYSIS OF OVERHEADS

Overheads indirect	Government	Co-operative	Private Company	Partnership
1. Rent	-	12,000	14,000	-
2. Rates & Taxes	1,000	300	2,000	7,400
3. Insurance	1,400	2,415	10,000	5,500
4. Salaries & wages	24,000	15,000	34,000	32,000
5. Post & Telegram	19,770	2,140	8,000	150
6. Telephones	8,000	-	-	8,400
7. Stationery	3,000	1,155	2,000	400
8. Electricity	50,000	9,920	16,500	9,200
9. Power & Heating	-	-	-	-
10. Travelling Expenses	5,000	2,250	30,000	9,900
11. Sales Expenses	-	-	10,000	-
12. Distribution Expenses	14,100	240	-	27,300
13. Director's fees	-	-	2,000	-
14. Auditor's fees	16,000	-	1,000	1,500
15. Legal expenses	-	-	6,000	2,250
16. Repairs and Renewals	35,000	4,600	25,000	3,100
TOTAL :	1,57,270	50,020	1,60,500	1,07,100

This should be studied that the overheads under various heads of expenditure are classified and collected which shows the organisations which are independent. Independent organisation has more overheads rather than supported by main stream, like Government or co-operative. The private sector has more expenditure in overheads to establish their concern. This analysis of various sectors studied as under.

The total of overheads of various sectors differs as per the size of the organisation which is as follows :

Government Sector	1,59,670	00%
Co-operative Sector	50,020	31%
Private Company	1,60,500	100%
Partnership	1,07,100	70%

The total of overheads and their proportion to the Government sector shows that only co-operative organisation has low overheads because of the mother organisation bears the expenditure of this unit whereas private sectors total of overheads shows they are quite equal to the overheads of Government Sector.

These indirect overheads are incurred to run the various activity of the departments. These departments are classified activity wise and therefore these overheads may be classified behaviour wise and department to calculate the cost of the job. The Government sector and private sector have their own buildings while other two sectors are rented building. Hence the depreciation of owned building and rent of the building is taken into consideration for calculation of cost of the job.

The total overheads are classified for our study department-wise that is factory overheads. Administrative overheads and selling and distribution overheads.

TABLE NO. 12

ANALYSIS OF OVERHEADS THAT IS FACTORY OVERHEADS

Factory Overheads	Government	Co-operative	Private	Partnership
1. Rent	-	12,000	14,000	-
2. Insurance	1,400	2,415	10,000	5,500
3. Salaries & wages	24,000	15,000	34,000	32,000
4. Electricity	50,000	9,900	16,500	9,200
5. Power & Heating	-	-	-	-
Total :	75,400	39,315	74,500	46,700

TABLE NO. 13

ANALYSIS OF ADMINISTRATIVE OVERHEADS

Administrative Overheads	Government	Co-operative	Private	Partnership
1. Rates & Taxes	1,000	300	2,000	7,400
2. Post & Telegram	19,770	2,140	8,000	150
3. Telephones	8,000	-	-	8,400
4. Stationery	3,000	1,160	2,000	400
5. Director's fees	-	-	2,000	-
6. Auditor's fees	16,000	-	1,000	1,500
7. Legal expenses	-	-	6,000	2,250
8. Repairs & Renewals	35,000	4,600	25,000	3,100
Total :	82,770	8,200	46,000	23,200

TABLE NO. 14

ANALYSIS OF SELLING AND DISTRIBUTION OVERHEADS

Selling and Distributive overheads	Government	Co-operative	Private	Partnership
1. Travelling Expenses	9,000	2,250	30,000	9,900
2. Sales Expenses	-	-	10,000	-
3. Distribution Expenses	14,100	240	-	27,300
Total :	23,100	2,490	40,000	37,200

It is to be studied that the indirect overheads are classified department for apportionment of overhead cost to the particular job for the ease in costing system in the press the classification of overheads is necessary. It is also practicable to classify the overheads as behavioural way that is fixed a semi variable and variable. But under printing industry it is very helpful to classify the overheads departmentwise for absorption of the job.

The above classification of overheads such as Factory overheads, administrative overheads and selling and distributive overheads is made as per the nature of the business. The items of overheads classified in the above tables are as per the nature and treatment given in the printing press. Few items which are charge^d to profit and loss A/C even though they are treated as administrative overheads.

The proportion of factory expenditure of every unit under study is as under :

Government Sector	0.30	Co-operative Sector	0.15
Private Sector	0.30	Partnership	0.25

The proportion of Administrative overheads of every unit under study is as under :

Government Sector	0.5	Co-operative Sector	0.05
Private Sector	0.3	Partnership	0.15

The proportion of Selling and Distribution overheads of every unit under study is as under :

Government Sector	0.2	Co-operative Sector	0.03
Private Sector	0.4	Partnership	0.37

The above study of apportionment of indirect overheads shows that service industry owned by Government and Private Company have big expenditure on indirect overheads. The establishment does not look forward to cost base analysis. Hence this study shows that the degree may be reduced to increase the productivity effectively and efficiently.

Analysis of various cost elements are studied and it is observed that whatever information obtained from the record of the units under study does not show any relevance to our study. As the units are of different nature and their objective is very different from each other they are not applying the costing system. It is also observed the cost consciousness does not exist in the mind of the printer. It is their belief that if the costing system is applied the cost of maintenance will increase and the expenditure will increase which may cause the decrease in profits. Hence instead of adopting costing system the press owners formed an organisation and this

organisation declares the printing rates of various jobs and accordingly the jobs of customers are charged. To secure the work from customers the presses are adopting this pricing policy little lower or higher rates from the published rates of association and this is their strong belief that they are costing the job of customer. This ignorance except Government printing press of other units will bring them in trouble or they will not be existed in the market in the long run. It is also observed that due to unscientific pricing method the whole printing industry of Kolhapur City is in trouble. The owners are not getting even marginal profit and workers are not getting the satisfying salary. On the other hand the customer is also not satisfied with quality printing at minimum cost.

An analysis of the questionnaire makes clear that not a single unit under study are filling the quotations and tenders on cost estimation base. But they fill the tenders and quotation on price list published by association. It is also studied that the jobs are not costed to match the revenue expenditure, except Government press. The costing system is very useful to study the financial position of organisation. This will be a guide to the organisation in taking decision regarding the business effectiveness and efficiency. Hence it is to remove the belief that costing system will increase the establishment expenditure but it is to be shown that by adopting costing system the financial planning and decisions like make or buy will increase efficiency. Hence under the study it is tried that how the costing system will be installed in the printing press which will be helpful to the organiser, customer, and Government.

REFERENCE BOOKS

1. Analysis of Press Cost : S.A. Sapre
2. Letter Press Printing : Team Report,
Productivity Government Printing &
Stationary Department,
Bombay.
3. Measurement of Productivity in : Directorate of Govt.
Government Presses Printing & Stationary
4. Cost Structure of Printing : Mr. S.A. Sapre
Press
5. Conference Papers : Directorate of Government
Printing & Stationary
Department.
6. Printing Industry - The : The Directorate of Govt.
Emerging Pattern Papers Printing & Stationary
Department