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A STUDY OF PRINTING INDUSTRY EMPLOYEES INCOME AND EXPERIENCE**A. CHELLADURAI****ASST. PROFESSOR OF COMMERCE (CA/ECSF)
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SIVAKASI****ABSTRACT**

The overall inference from the study is impressive in working conditions, level of wages improvement of the workers and introduction of new technology in the study unit. If the concerned authorities duly implement the above suggestion, development of new technologies of the printing industry may be increased. But the improvement is not in the hands of the management alone. It needs concentrated efforts of owners, workers, financial institution and banks. A workable co-operation among these four groups can alone introduce the new technology in the printing industry.

KEYWORDS

employee income, printing industry.

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INTRODUCTION

Indian Printing Industry has undergone many revolutionary changes in the past 15 years. India in the year 1990 initiated a process of reforms which aimed at shedding protectionism and embracing liberalization of the economy. Privatization was emerged with the aim of integrating the Indian economy with the world economy. This drastic change in the country's economy opened the doors for the Indian Printing Industry to modernize, by investing in the latest of technology and machinery. For the last 15 years the average compound annual growth rate has been higher than 12%. Post 1990 the trend was to acquire the latest and the best equipment and machines.

Today the progressive printers are equipped with the latest computer controlled printing machines and flow lines for binding, while the state of the art digital technologies are being used in pre-press. Leading Printing companies have optimized the use of information technology in each and every area of the Printing business. Printers today are equipped at par with the best print production facilities in the world. India is becoming one of the major print producer and manufacturer of printed paper products for the world markets. The Printing Industry's quality standards have improved dramatically with immense production capacities. Some Printers in the country have won recognition by winning prizes at international competition for excellence in printing.

Over the years the Indian Printing Industry has gradually grown in all parts of the country. This industry has not been affected by the advent of TV and Internet causing no hindrance to the growth of and requirement for printing professionals. In recent times the industry has made giant strides by improving its machinery in terms of the technology and speed. Today Computers and electronics have invaded all the departments of printing which are improving quality and speed of the jobs executed with the consequent enhancement of costs enormously.

In fact emergence of computers has complemented the printing business and has played a significant role in increasing its status as a clean profession. The So-Called Hubs for Printing Industry are a setoff industry Players who are growing systematically and regularly. They are usually the proprietors who carry their own business & who specifically do not belong to any specific region of India but are scattered all over the country. For ease there are clusters of printing industry which are present in North: Amritsar, Delhi, Faridabad - West: Ahmadabad, Bombay, Gujarat - South: Bangalore, Coimbatore, Madras, Hyderabad.

STATEMENT OF PROBLEM

From the simple task of recycle the paper to printout for human usage which is main aim of printing. Printing industry plays a vital role in the promotion and the development of economy of Sivakasi town. The large number of printing industries in India in general and in Sivakasi town particular, is unorganized units and hence the printing industries are mainly employing unskilled or semiskilled employees who are neither educationally qualified nor technically experienced. Sivakasi town provides employment opportunity to the printing employees throughout the year but the uneducated unskilled employees and owner's number is high. Some advanced technologies are available for printing industry. The advanced technology helps to increase the production level and create the many printing employees into unemployment. In this situation the researcher finds it necessary to know the impact of using advanced technology in printing industry at Sivakasi.

SCOPE OF THE STUDY

Sivakasi in Virudhunagar District occupies a notable in the industrial map of India, Because of the concentration of the printing, match works and fireworks industry. It is an industrial town and busy business town.

People from all over the country come to sivakasi town to have business contact. A number of business people come and stay to do their business here.

The researcher makes an attempt to analyze the impact of new technology on printing units at sivakasi.

HYPOTHESES

On the basis of foregoing research objectives, the following hypotheses were developed for the present study.

- There is no significant relationship between Experiences of the employees and Income of the employees.

OBJECTIVES OF THE STUDY

The following are the objectives of the study.

1. To know the origin and growth of printing industry
2. To study how the advanced technology is being used in printing industry at sivakasi.
3. To analyze the working condition after introducing the new technology in printing industry.
4. To examine the satisfaction of employees after the introduction of new technology.
5. To know the impact of using new technology in printing industry at sivakasi.

6. To offer summary of findings and suitable suggestion.

METHODOLOGY

The present study is based on both primary as well as secondary data. The primary data are those data, which are collected from the owners and employees of printing industry in Sivakasi. For that, a separate pre tested schedule was constructed for each category and collected the opinion of the employees about the printing services and their improvement with printing industry.

The secondary data are those data, which are already collected by someone else. The researcher has collected the secondary data from the books and research articles such as Indian Journal of Indian printing development and so on.

PRIMARY SOURCE

- A document or record containing first-hand information or original data on a topic
- A work created at the time of an event or by a person who directly experienced an event
- Some examples include: interviews, diaries, letters, journals, original hand-written manuscripts, newspaper and magazine clippings, government documents and so on.
- The history how to: primary sources guide has lots more information

SECONDARY SOURCE

- Any published or unpublished work that is one step removed from the original source, usually describing, summarizing, analyzing, evaluating, derived from, or based on primary source materials
- A source that is one step removed from the original event or experience
- A source that provides criticism or interpretation of a primary source
- Some examples include: textbooks, review articles, biographies, historical films, music and art, articles about people and events from the past.

LIMITATIONS OF THE STUDY

The study is confined to the employees and owners of printing industry at Sivakasi town only.

- The data collected from the respondents were the first hand information and so its inadequate shortcomings are ignored.
- In the course of field survey, few respondents hesitated to give proper responses due to a sense of fear and so there may be some inherent shortcomings of facts.

REVIEW OF LITERATURE

Raija Kalimo and Anneli Leppänen (1985)¹ in their study "Feedback from Video Display Terminals, Performance Control and Stress in Text Preparation In the Printing Industry" examined that the study investigated the impact of computer technology on work content, feedback, performance control, and mental strain involved in text preparation in printing industry. The employees applying computer technology assessed the challenge, self-determination and satisfaction of their work as higher than those applying traditional methods. Vigilance was significantly lowered during a day only among the perforator typesetters. Their daily self-ratings were also the most negative. It seems likely that, in text preparation tasks with minimal variety, stress is diminished by the use of visual display terminals, which make feedback and control over performance possible. Although the groups did not differ with respect to perceived chronic symptoms, on the whole the use of computer technology seems to influence the process of text preparation favorably.

As for the reasons explained above studies on printing industry as an economic activity is not available. Also the first scientific study on this industry had been done in 1985 by **Hira Kant Jha**, under the title 'Empirical study of printing presses in Patna, Bihar', as dissertation for his Ph. D. in Patna University, (1985)². There was another study in Punjab focusing on the employment and wages of the printing press employees of Amritsar in 1955. However none of the above known studies had approached the printing industry economics as a whole or as its major component parts, so as to use for reference or review. Also the author could not come across any other scientific study on this subject topic.

Dickens, William T. and Lawrence F. Katz (1987)³ in their study on, "Inter-Industry Wage Differences and Industry Characteristics" explained the inter industry wage differences for nonunion employees and finds that even after controlling for a wide range of individual characteristics and geographic location a substantial amount of individual wage variation can be accounted for by industry differences. High wage industries have lower quit rates, higher labor productivity, fewer women, more educated employees, longer work weeks, a higher ratio of nonwage to wage compensation, higher unionization rates, larger establishments and firms, higher concentration ratios and are more profitable. The implications of these results for alternative theories of wage determination are considered.

Birkenshaw, John, (1992)⁴ in his lecture published in Ink & Print, 1993 issue talks about the Future trends in printing, which explain in detail the convergence of information technology, knowledge management and printing industry in providing customer a new composite service.

Mark Stuart (1994)⁵ in his study, on "Issues And Problems of Formulating and Implementing Training Policy Within Printing Industries" had examined that Recruitment, Training and Retraining Agreement covering the UK printing industry and, as well as identifying the intrinsic strengths and weaknesses of such joint management trade union initiatives and considered the detailed impact at workplace level.

V.G. Patel (1994)⁶ in his study on "The Working Conditions in Textile and Wood Processing Industries" had investigated using a simple risk assessment method. It is necessary to increase interest from the side of employers for using the method and analyzing the work environment with the aim of improvement implementations. The main complaints in textile industry are high temperature in the workroom, bad ventilation, intense work and the dependence of employees' work results from the others.

David Walters (1995)⁷ in his study on "Employee Representation and Health and Safety" had considered the role of employee representation in improving health and safety performance within small enterprises. He had identified and discussed supportive factors that might enhance representative participation in health and safety in small enterprises, including the role of regulation, and employer and trade union support. He had also considered the implications of the Health and Safety (Consultation of Employees) Regulations 1996 and concluded that in their present form they offer only very limited support for employee representation in health and safety in small enterprise.

P.K. Nag (1998)⁸ in his study "Risk Potentialities among Shift Employees" had examined the risk potentials and accident patterns amongst the monthly rotating shift employees and permanent night employees in textile industries. A detailed questionnaire survey indicates that frequent occurrence of accidents in the

¹RaijaKalimo and Anneli Leppänen, "Feedback from video display terminals, performance control and stress in text preparation in the printing industry", *Journal of Occupational Psychology*, Vol.58, Issue 1, March 1985, pp 27-38.

²Hira Kant Jha, Patna, Bihar' "studies on printing industry as an economic activity is not available", 1985, There was another study in Punjab focusing on the employment and wages of the printing press employees of Amritsar in 1955.

³Dickens, William T. and Lawrence F. Katz, "Inter-Industry Wage Differences and Industry Characteristics", *Unemployment and the Structure of Labor Markets*, 1987, pp. 48-89.

⁴Birkenshaw, John, published in Ink & Print, "the convergence of information technology" 1992.

⁵Mark Stuart, "issues and problems of formulating and implementing training policy with in printing industries" *Human Resource Management Journal*, Vol. 4, Issue 3, march 1994, pp 62 -78.

⁶V.G. Patel, "The working conditions in textile and wood processing industries", *International Journal of Reliability, Quality and Safety Engineering*, Vol.9, 1994.

⁷David Walters, "Employee representation and health and safety", *employee relation*, Vol.2, issue 20, 1995.

⁸P.K. Nag, "Risk potentialities among shift workers", *International Journal of Industrial Ergonomics*, Vol.21, Issues 3-4, March 1998, pp 275-281.

industries was a culmination of multiple factors, such as man-machine interfaces, methods of work, working conditions and environmental stresses. About 60% accidents of the morning shift were in the first half of the shift; in night work, the second half of the shift constituted 57% of the accidents.

Hanebuth, Dirk, Meinel, Michael, Fischer and Joachim (2006)⁹ in their study on "Health-Related Quality of Life, Psychosocial Work Conditions, and Absenteeism in an Industrial Sample of Blue- and White-Collar Employees" had evaluated the relationship of health behavior, health perception, work characteristics, and demographic variables with sickness absenteeism in industrial employees. Effort-reward imbalance, lack of support by supervisors or co-employees, negative affectivity, exhaustion, and impaired health perception were significantly associated with absence spells and the time lost index. Job demands and job control as well as over commitment were unrelated to absenteeism indices. Multivariate models suggest mediation through impaired health-related quality of life. In this Study, the researcher has made an attempt to analyze the attitude of employees towards the new technology introduced in the printing units at sivakasi and also the impact of new technology adopted on the performance of employees.

TABLE 1

S.No	Sex	Respondents	Percentage	S.No	Particulars	Respondents	Percentage
1	Male	60	75.0	1	Literate	72	90.0
2	Female	20	25.0	2	Illiterate	8	10.0
Total		80	100.0	Total		80	100.0
S.No	Age	Respondents	Percentage	S.No	Particulars	Respondents	Percentage
1	Below 20 years	5	6.2	1	school	31	43.1
2	21 - 30 years	20	25.0	2	U.G	19	26.3
3	31 -40 years	27	33.8	3	P.G	4	5.6
4	Above 41 years	28	35.0	4	Diploma	26	25.0
Total		80	100.0	Total		80	100.0
S.No	Place	Respondents	Percentage	S.No	Members	Respondents	Percentage
1	Rural	46	57.5	1	Below 3	20	25.0
2	Semi-urban	18	22.5	2	3 to 5	51	63.8
3	Urban	16	20.0	3	Above 6	9	11.2
Total		80	100.0	Total		80	100.0

Table above clearly indicates that 75 percent of the respondents are male and the remaining 25 per cent of the respondents are female., the age of 5 employees is below 20 years; followed by 20 of the respondents who are under the age group of 21 to 30 years; 27 of the respondents are coming under the age group of 31 to 40 years and the remaining 28 of the respondents are belonging to the age group of 41 years and above. Printing employees, 46 employees are living in rural area; followed by 18 of the respondents whose living place is semi-urban and the remaining 16 of the respondents are living in urban area. 90 percent of the respondents are literates and the remaining 10 per cent of the respondents are illiterates. 43.1 per cent of the respondents are found to be educated up to school level, 26.3 per cent of the respondents are at undergraduate level, 5.6 per cent of them are at postgraduate level, 11.1 per cent of them are diploma holders and 13.9 per cent have others. 25.0 per cent of the respondents' family composition is below 3 members, 63.8 per cent of the employees have 3 to 5 members and the remaining 11.2 per cent of the respondents compositions are above 6 members.

It is inferred from table 4.1 that 75 per cent employees are male. It is indirect that 35 per cent of the employees are above 41 years and are all experienced employees. It is concluded that 57.5% of the employees are living in rural area and they are ready to take the work in the new printing technology. It is found that majority of the respondents (90%) are literates. It is noted from table 4.5 that 43.1 per cent of the respondents are educated up to school level. It is inferred that 63.8 per cent of the employees have 3 to 5 members in their family.

MONTHLY INCOME AND YEAR OF EXPERIENCE

Income and experience is to be one of the important factors which decide the working pattern of printing industry. The researcher has studied the monthly income of the printing employees and experience of the employees. So the data are collected for this study and presented.

MONTHLY INCOME AND YEAR OF EXPERIENCE

TABLE 2

S.No	Income	Respondents	Percentage	S.No	Experience	Respondents	Percentage
1	Below Rs.5000	18	22.5	1	Below 2 years	15	18.7
2	Rs.5001 to Rs.7500	38	47.5	2	2 to 4 years	29	36.3
3	Rs.7501 to Rs.10000	10	12.5	3	5 to 7 years	25	31.3
4	Above Rs.10000	14	17.5	4	Above 7 years	11	13.7
Total		80	100.0				

Source: Primary Data

From Table 4.8, it is clear that out of 80 respondents, 22.5 per cent of the employees earn income below Rs. 5000, 47.5 per cent of the employees are under the income group Rs. 5001 to Rs. 7500, 12.5 per cent of the employees are earning monthly income from Rs. 7501 to Rs. 10000, and 17.5 per cent of the employees are having income above Rs. 10000. It is clear that out of 80 respondents, 18.7 per cent of the worker's experience is below 2 years, 36.3 per cent of the employees are 2 to 4 years experienced, 31.3 per cent of the employees are 5 to 7 years experienced and 13.7 per cent of the employees are above 7 years experienced. 18.7 per cent of the worker's experience is below 2 years, 36.3 per cent of the employees are 2 to 4 years experienced, 31.3 per cent of the employees are 5 to 7 years experienced and 13.7 per cent of the employees are above 7 years experienced.

It is known that 47.5 per cent of the printing employees are earning income from Rs. 5001 to 7500. 36.3 per cent of the printing employees have 2 to 4 years of working experience.

HYPOTHESES

There is no significant relationship between income and Experience of the employees.

TABLE 3: EMPLOYEE'S INCOME AND YEAR OF EXPERIENCE [OBSERVED FREQUENCY (O)]

Employees Income	Year of experience				Total
	Below 2 years	2 - 4 years	5 - 7 years	Above 7 years	
Below Rs. 5000	5	5	5	3	18
Rs. 5001 - Rs. 7500	7	16	9	6	38
Rs. 7501 -Rs. 10000	1	2	6	1	10
Above Rs. 10000	2	6	5	1	14
Total	15	29	25	11	80

Source: primary data

⁹Hanebuth, Dirk, Meinel, Michael, Fischer and Joachim, "Health-Related Quality of Life, Psychosocial Work Conditions, and Absenteeism in an Industrial Sample of Blue- and White-Collar Employees", Journal of Occupational & Environmental Medicine, Vol.48, Issue 1, January 2006, pp 28-37.

TABLE 4: EMPLOYEE’S INCOME AND YEAR OF EXPERIENCE [Expected frequency (E)]

Employees Income	Year of experience				Total
	Below 2 years	2 - 4 years	5 - 7 years	Above 7 years	
Below Rs. 5000	3.37	6.53	5.63	2.47	18
Rs. 5001 - Rs. 7500	7.13	13.77	11.87	5.23	38
Rs. 7501 -Rs. 10000	1.87	3.63	3.13	1.37	10
Above Rs. 10000	2.63	5.07	4.37	1.93	14
Total	15	29	25	11	80

Source: computed data

TABLE 5: CALCULATION OF CHI-SQUARE TABLE

S.No	Cell	O	E	(O-E) ²	(O-E) ² /E
1	R ₁ C ₁	5	3.37	2.66	0.79
2	R ₁ C ₂	5	6.53	2.34	0.36
3	R ₁ C ₃	5	5.63	0.40	0.07
4	R ₁ C ₄	3	2.47	0.28	0.11
5	R ₂ C ₁	7	7.13	0.02	0.00
6	R ₂ C ₂	16	13.77	4.97	0.36
7	R ₂ C ₃	9	11.87	8.24	0.69
8	R ₂ C ₄	6	5.23	0.59	0.11
9	R ₃ C ₁	1	1.87	0.76	0.40
10	R ₃ C ₂	2	3.63	2.66	0.73
11	R ₃ C ₃	6	3.13	8.24	2.63
12	R ₃ C ₄	1	1.37	0.14	0.10
13	R ₄ C ₁	2	2.63	0.40	0.15
14	R ₄ C ₂	6	5.07	0.86	0.17
15	R ₄ C ₃	5	4.37	0.40	0.09
16	R ₄ C ₄	1	1.93	0.86	0.45
ΣX²					7.23

Degrees of Freedom = (r-4) (c-4)
 = (4-1) (4-1)
 = 9

Calculated value = 7.23

Table value of χ² = 1.14

Since the calculated value is more than the table value (0.05), the hypothesis is accepted. There is no significant relationship between year of experience and income level.

SUGGESTIONS

A detailed analysis of the study on Impact of using Advanced Printing Technology in printing industries has enabled the researcher to offer the following suggestions for the betterment of the situation.

- Majority of the workers working in printing units were not given proper education at advanced level of printing technology. So informal education may be properly arranged in the study units.
- New technology selected owners can form a counseling centre to counsel the owners regarding the problems faced in their business.
- Banks and financial institutions should offer hundred per cent loans without collateral security to the qualified printing owners. Similarly, term loans and working capital loans should be sanctioned liberally on differential terms.
- More publications should be brought out and distributed to new technology users in order to create awareness and encourage them to avail the benefits offered to them. Media should be used to give maximum information for promoting the cause of new technology users.
- Basic computer training may be given to all the printing workers of the new printing technology works.
- To update the skills and efficiency of the printing workers, new printing technology owners should arrange training programme periodically.
- Training imparts additional knowledge to a work. It is suggested that training for both workers and owners must be conducted at least once in two years. The workers and owners can get knowledge about the latest printing technology maintenance and handle of new technology.
- The owners have to first time invest in the low worthy technology (ex: CTF), because the above investment have a minimum risk, while comparing to highly invested technology.
- Even though the nature of printing industry is simple, it is better for the management to provide training to the workers. Whenever there is a change in the production process, necessary training facility should be arranged by the management to ensure efficiency and productivity.

CONCLUSION

Over all inference from the investigation is impressive in working conditions, level of wages improvement of the workers and introduction of new technology in the study unit.

If the concerned authorities duly implement the above suggestion, development of new technologies of the printing industry may be increased. But the improvement is not in the hands of the management alone. It needs concentrated efforts of owners, workers, financial institution and banks. A workable co-operation among these four groups can alone introduce the new technology in the printing industry.

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