

Identification of factors affecting wastage of manpower in educational institutions of Dhubri District, Assam, India

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ABSTRACT

Wastage of Manpower in organization is an important problem which both the organization and employees faces today. A study on the principal factors that are responsible for wastage of manpower in the organization would be useful in overcoming this trouble. In this study, some statistical analysis has been done to identify such factors. 150 samples were collected by means of stratified random sampling from 30 educational institutions taking at least four individuals from each institutions of Dhubri district. To study wastage of manpower we have taken length of service and percentage of leaving a job of the employee as main factor. Correlation and regression analysis indicates that age, length of service, qualification, percentage of leaving a job are the primary factors that influence wastage of manpower. The results of this study reveal various affecting factor of wastage of manpower as well as Job Satisfaction.

Key words: Wastage of manpower, length of service, Job satisfaction, Percentage of leaving.

INTRODUCTION

In any organization, there must be proportionate wastage out of the general output or yield. These wastages can be seen as loss of money, time and manpower. Wastage of manpower of an employee as well as organization can be seen from the propensity to leave a job of the employee. By convention, the propensity to leave a job is quantified on the basis of completed length of service (CLS). Bartholomew and Forbes, (1979) have discussed the relation of CLS to wastage of manpower. It is well established that CLS is a useful index to assess wastage of manpower, for it quantifies the tendencies of an average employee. Even though CLS is a useful index, often it is necessary to consider other variables as well, in order to account for factors other than those related to familiarity or the length of service. Biswas and Adhikari, (1992), studied the manpower attrition by using Cox's regression model, which considers both quantitative and qualitative variables. Such a combination is likely to give a realistic prediction of the manpower attrition.

The shortage of manpower planning system (MPS) depends on individual propensity to leave the organization which in turn depends on various factors as discussed before. Such models have been discussed by Grinold and Marshall, (1977), Bartholomew and Forbes, (1979). For statistical approach one may refer to Bartholomew, (1971). Lesson, (1982) has given methods to compute shortages (Resignations, Dismissals, Deaths) and promotion intensities which produce the proportions corresponding to some described planning proposals. Markovian models are designed for shortage and promotion in MPS by Vassiliou, (1976). Subramanian, (1996) has made an attempt to provide optimal

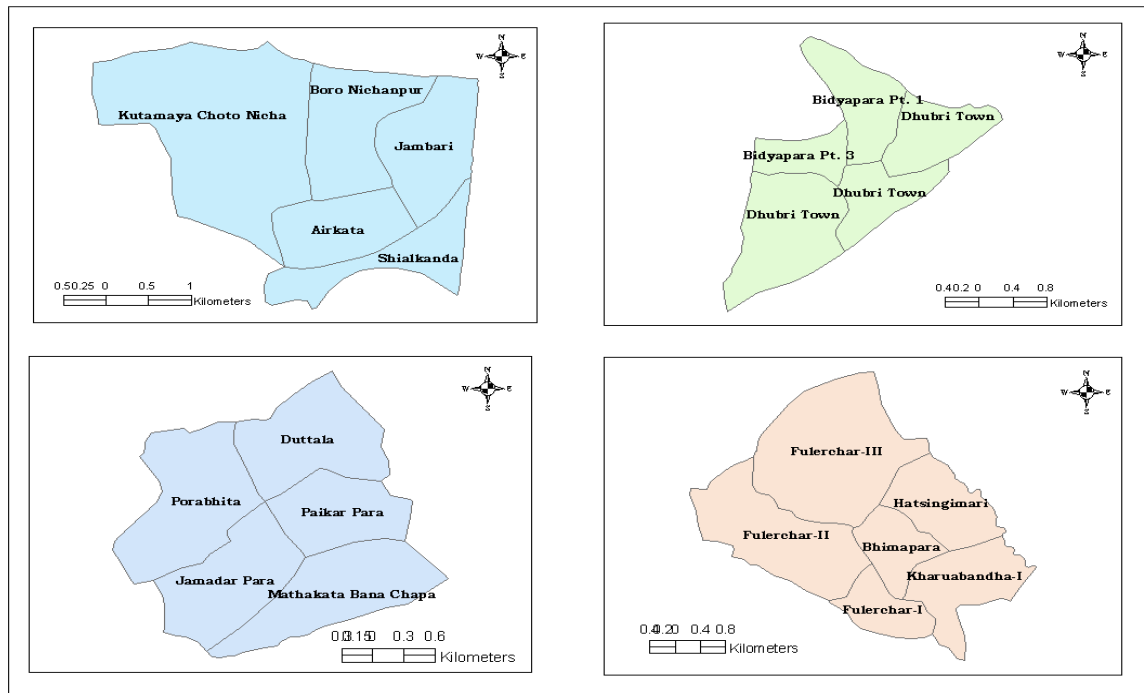
policy for recruitment, training, promotion and shortages in manpower planning models with special provisions such as time bound promotions, cost of training and voluntary retirement schemes.

In the present work mainly educational institutions are taken as the source for monitoring wastage of manpower. Information regarding the various affecting factors of wastage of manpower as well as job satisfaction namely length of service, training, promotion, reason of resigning the previous job, chance of leaving the current job etc. have been studied. To study job satisfactions of the employee we have taken length of service and percentage of leaving the current job of the employee as the main aspect. Level of employee’s job satisfaction, relationship between employee’s socio-economic character and other affecting factors of job satisfaction for selected organizations have been studied.

MATERIALS AND METHODS

An extensive field study have been conducted from rural to urban areas of **Dhubri** district of Assam with a direct field encounter with the employees with a prepared schedule. Samples have been mainly selected focusing on educational institutions only. Data were collected through structured schedule relating to personal information and factors that influence the wastage of manpower in different places of the selected districts, taking at least four employees from each organization. Organizations located in selected districts were identified through stratified random sampling. The planned schedule was issued to a total of 150 employees in educational institutions including primary schools, high schools, higher secondary schools and colleges and information regarding various affecting factors of wastage of manpower was obtained. Software SPSS 16.0 has been used for the analysis. After collection of the primary data simple descriptive statistical analysis, correlation, regression, t-test and F-test have been carried out to study various affecting factors of **job satisfaction** and **wastage of manpower** in the study.

Survey Area of Dhubri District



RESULTS AND DISCUSSION

According to the descriptive statistics, the sample consists of 150 personnel from thirty educational institutions including primary schools, high schools, higher secondary schools and colleges. The sample consists of 132 male (88%) and 18 female (12%) employees. 1.30% of the sample is between the ages of 10-20, 14.7% of the sample is

between the ages of 20-30, 47.3% of the sample is between 30-40, 26% is between 40-50, 10.7% is between 50-60. 7.3% have qualification below HSLC, 4% having HSLC, 24.7% are HS, 37.3 are Graduation, 16% have graduation and above, 9.3% Master’s Degree and 2.7% have a Doctorate Degree. According to their designation 10%(office peon), 4.7%(LDA), 1.3%(UDA), 61.3%(Teacher) and 22.7%(Lecturer). Out of the total samples 73.3% works without salary, and 26.7% are in permanent job. 88% have no previous experience and 12% have experience and they left their previous job due to salary, local area, transfer etc which indicates wastage. 39.7% have taken IGNOU and SSA training. Only one employee has promoted to higher level and it is automatic promotion.

From this study we have seen that although 73.3% people have working without salary but their percentage of leaving is very low as compared to Darrang district because they do not want to leave their local area. 126 employees have (0-20%) chance of leaving, 5(20-40%), 6(40-60%), 7(60-80%) and 6(80-100%).

Correlation and Regression Analysis:

From the correlation study we have seen that there is a strong positive correlation between length of service and age. Higher the age results the long service time of the employee (.612^{**}, highly significant at 0.01 level). And there is a negative correlation between length of service and percentage of leaving a job (-.289, highly significant at 0.01 level). The percentage of leaving is high in short service time of the employee.

Negative correlations also have been found for the factors qualification of the employee, experience and training with length of service (-0.214(0.01), -0.177(0.01) and (-0.261, 0.01). And positive correlation is found between length of service and qualification of the employee (0.261 significant at 0.01 levels). Length of service is independent of sex.

Again we have seen that percentage of living a job of the employee is independent of factors as age, sex, qualification, designation, training and promotion. But there is a negative correlation between percentage of leaving a job of the employee and salary type (-0.167 at significant level, 0.05) and percentage of leaving a job of the employee and length of service (-0.289 at significant level 0.01)

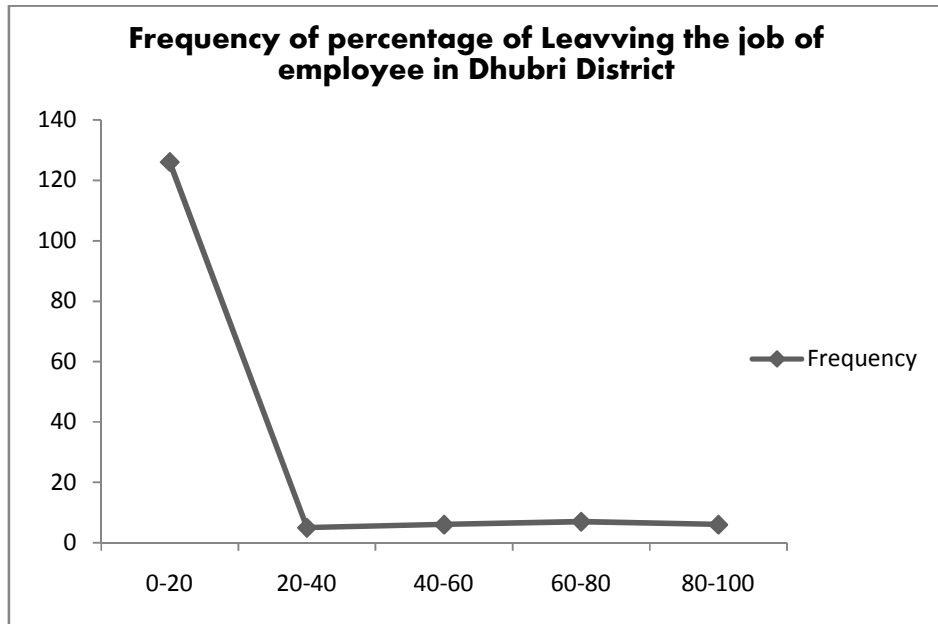
Predictors	F-Value	Beta	t	P
Age	154.154	0.714	12.416	.000
Dependent Variable: Length of Service in the current organization				

Predictors	F-Value	Beta	t	P
Length of Service in the current organization	13.457	-.289	3.668	.000
Dependent Variable: Percentage of leaving the current organization				

As seen in Table 1 and Table 2 there is a significant and positive relationship between age and length of service in the current organization ($\beta = 0.714$, $t = 12.416$ and $p = 0.000 < 0.05$) and also there is a significant and negative relationship between length of service and percentage of leaving in the current job ($\beta = -0.289$, $t = 3.668$ and $p = 0.000 < 0.05$).

T-test:
 From the T-test it is clear that significant result is found for Age-Length of service ($t=39.460$ and $P=0.000<0.05$), Length of service in the current organization by percentage of leaving the job ($t=3.393$, $P=0.001$)

From F-test significant result is seen for length of service by age ($F=27.72$ and $P=.000<0,05$) and Percentage of leaving by length of service ($F=6.05$ and $P=0.001<0.05$).



CONCLUSION

The study reveals that (i) Peoples were more prone to government job rather than private job, (ii) Lack of job oriented course in the curriculum as well as knowledge; peoples of general curriculum become saturated with respect to available jobs. (iii) Lack of interest and higher expectation and phobia among the samples they remained engage in non-government and non-private institutions without salaries for a long time, (iv) Due to non availability of information and facilities, communication problem, language etc. there was less number of skilled person in Dhubri.

Thus the primary factors responsible for wastage of manpower have been established. However, further studies are required in order to understand the complexity of each of these factors and to understand their distribution among the various subcategories.

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REFERENCES

- [1] Bartholomew D.J. and Forbes A.F, *Statistical Techniques for Manpower Planning*, John Wiley, Chichester, **1979**.
- [2] Bartholomew D.J., *Statistician*, 20, **1971**, 3-26.
- [3] Biswas S. and Adhikari S.K., *Manpower Journal*, **1992**, 28, No. 2, 1-7.
- [4] Ibrahim, K., Kamil, A. A., and Mustafa, A., *Advances in Applied Science Research.*, **2010**, 1(1); 1-8.
- [5] Khadar Babu, S. K., Karthikeyen, K., Ramanaih, M. V., and Ramanah, D., *Advances in Applied Science Research.*, **2011**, 2(2); 128-133.
- [6] Lesson G.W., *J. Opl. Res. Soc.*, **1982**, 33, 433-442.
- [7] Grinold R.C., Marshall K.J., *Manpower Planning Models*, New York, **1977**.
- [8] Ramanah, D. V., Ramanaih, M. V., Khadar Babu, S. K., Karthikeyen, K., *Advances in Applied Science Research.*, **2011**, 2(2); 284-289
- [9] Subramanian V., *International Journal of Management and Systems*, **1996**, 12 (2), 179-184.
- [10] Vassiliou P.C.G., *Operat. Res. Quart.*, **1976**, 27, 59-76.