

A STUDY OF WORKERS EFFICIENCY WITH INCREASE OF WORK LOAD WITH SPECIAL REFERENCE TO TELECOM SERVICES

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INTRODUCTION

Efficiency is very important factor for overall profitability and enhance in the productivity of any organization. It is an important factor in the firm's organizational effectiveness, this being the ease and degree of success with which the organization is able to accomplish its aims. There are various views for efficiency; it can be viewed as individual efficiency, group efficiency, organizational efficiency etc. In the present study we concentrated on the organizational efficiency which directly related with the group efficiency of the employees. **Efficiency** in general describes the extent to which time, effort or cost is well used for the intended task or purpose. It is often used with the specific purpose of relaying the capability of a specific application of effort to produce a specific outcome effectively with a minimum amount or quantity of waste, expense, or unnecessary effort. "Efficiency" has widely varying meanings in different disciplines. In general, efficiency is a measurable concept, quantitatively determined by the ratio of output to input, it may also defined as Time taken by a worker to complete a job compared with the standard time allowed for it, expressed usually as a percentage. Formula: $\text{Time taken by a worker} \times 100 \div \text{standard time allowed}$.

Due to differences in the study context, there are considerable variations in the efficiency terms used. Telecom services are interventions provided to improve telecom facilities for people as per need. This reflects the primary objective of telecom from a social perspective. In this context, telecom sector *refers* to how well telecom resources are used to obtain telecom services and to provide interruption free service to subscribers. In brief efficiency of telecom organization is to provide interruption free services to subscriber with available resources and optimum expenditure.

Efficiency is a vital factor to the effectiveness of the organization's acquisition of resources and the use of those resources to implement its plans, but it is less important to the creation of those plans. Increased organizational efficiency make implementation both cheaper and smoother. Despite this, organizational efficiency is still important to planning because it enables plans that are otherwise impossible. It provides valuable information on how an organization is performing, where it would like to be, and how it can achieve its goals. Thus analysis and evaluation of efficiency is very important for any organization and it helps in various dimensions to organization .

The efficiency and quality services will depend upon the efficiency of the workers and employees of organization, as efficiency increases productivity and saves both time and money.

There are so many factors which influence the efficiency of workers and employees, and hence the organization, the increase in work load over the employees is one of the dominating factor. The present study was conducted for analyzing the impact of increase in work load over the efficiency of the employee and hence on to organization. The reference unit is one of the small unit of BSNL telecom sector. This reference unit is a Long Distance maintenance functional unit responsible for the maintenance of long distance Telecom transmission networks and systems spread over western and central part of MP State and is responsible for maintaining near about 6000 K.M. of OFC routes and various national rings and transmission system. The effective maintenance of transmission systems is carried out by a core maintenance group consisting of Indoor and Outdoor maintenance staff and workers (approximately 250 persons including executives).

The increase in need of telecom services increases the telecom traffic and so the nos. of transmission equipment and OF Cable route, this increase in telecom traffic causes the increase in work load over the workers and staff, this extra work load also affects the efficiency of the employees. In the present study it is prominently analyzed and evaluated that how the efficiency of the workers affected with the increase in need of telecom services and hence the telecom traffic. The efficiency, performance and out put of this unit is very much related and affected by the efficiency of the workers of this unit. For this study data of last 5 years is compared to draw the conclusion with respect to increase in telecom traffic and services, numbers of staff working and there efficiency for restoration of faults and maintenance of telecom networks.

MEASUREMENT OF EFFICIENCY

It is little bit difficult to measure the efficiency in service sector compare to production sector. Out of available option one of the most suitable method in our case is Benchmark method. Benchmarking is a systematic process of comparing processes and performance against others, to improve business practices. Benchmarking may be performed internally by comparing similar operations or functions within an organization, or externally against other organizations. These could include competitors or organizations with exemplary practices in other industries. Table 1 shows the common types of benchmarking used by organizations.

Table 1: Types of Benchmarking

<i>Type</i>	<i>Definition</i>
Internal Compare	similar activities within an organization.
Competitive	Compare against direct competitors within the same industry.
Functional / Process	Compare against other organizations identified to be leaders of that particular function or process. Such organizations need not be from the same industry.

Generic Compare against organizations recognized as having World class products, services or processes.

Benchmarking compares indicators and processes or functions that are critical to an organization's competitive advantage. Based on the benchmarking findings, organizations can put in place specific action plans to adapt and implement the best practices to improve their performance. The indicators should be analyzed by taking into account the organization's operation, and the performance of other indicators. Benchmarking techniques are used to assess the level of technical efficiency relative to certain benchmark units. Benchmarking results reflect the selection of cost effective care procedures for particular interventions and the level of operational efficiency in performing the chosen procedures. But the benchmark units may not use cost-effective procedures and can still be assessed as relatively efficient within the sample.

Measurement of Efficiency for Reference Unit

The reference unit is a telecom service maintenance organization therefore the quantitative measurement of output and hence the efficiency is difficult. For this unit, **Efficiency** in general describes the extent to which time, effort or cost is well used for the intended task or purpose. It is often used with the specific purpose of relaying the capability of a specific application of effort to produce a

specific outcome effectively with a minimum expense, unnecessary effort, and restoration of faults within minimum time. In reference unit there are certain norms for restoration of OF cable and equipment faults. For fault restoration 8 hrs. is allowed time, and efficiency is evaluated on the basis of percentage of faults restored within 8 hrs. and availability of media for telecom traffic, therefore this parameter is dominant parameter for calculation of efficiency of organization and hence of workers and employees. In the present study efficiency is evaluated and analyzed on this parameters.

For our proposed study we utilized benchmarking technique for analysis and evaluation of efficiency. Here the Benchmarking *within the institution* or *Internal comparison*, to compare activities within organization with pre decided and specified standard parameters were used. In reference unit following are some standard parameters or indicator to evaluate the efficiency:

- 1. Numbers of faults:** For number of faults 0.175 faults /100 km./month is standard parameter
- 2. Fault restoration time:** For fault restoration time 90% faults are restored within 8hrs. is standard parameter.
- 3. Media availability:** For media availability the standard parameter is 98.5%

Thus based on above benchmarking indicators performance of reference unit for last 5 years was compared and

efficiency was analyzed with increase in telecom traffic and hence with workload.

DATA ANALYSIS and CONCLUSIONS

For comparison and efficiency calculation data of last 5 years were collected and analyzed and following important conclusions were drawn:

1. During the span of 5 years there is tremendous increase in telecom traffic in reference unit , there is **12.12%** increase is observed in OFC route and **125.86%** increase is observed in transmission system capacity. Also during the period large capacity transmission equipments and switching equipments were installed to provide better quality services to subscribers. During last 5 years **14.81%** working staff reduces and less than 50% staff is working compare to sanctioned strength of the employees. Due to routine retirement/superannuation and non deployment of new staff, staff was reduced continuously,

There is increase in work load over the staff to handle the increase in telecom traffic. Work load increases due to increase in telecom traffic and reduction in working staff.

2. With the increase in work load reduction in efficiency is observed. There is gradual fall in efficiency within defined time frame. The numbers of faults are increasing year by year from 2008 to 2012 (i.e.**575** of 2008 to **1344** of 2012). Average restoration time is also increasing from **5.83 (=6.23**

hrs) of 2008 to **9.43** hrs of 2012. Also the numbers of faults per month per 100 km. is also **greater than 0.175** of targeted values in each year and is continuously increasing from 2008 to 2012. There is also standard that 90% faults should be restored within the 8 hrs., here in each year the percentage of faults restored within the 8 hrs is **less than 90%**. In this manner these vital parameters deciding the efficiency indicates that there is fall in efficiency.

3. As for as media availability is concerned the efficiency of staff is almost constant and no significant reduction in this regard is observed and media was provided and available almost at par with the targeted value. Thus by present specific study it can be concluded that with the increase in work load reduction in efficiency is observed, and for generalizing this concept more study with different units of telecom sector is also required.

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ISSN: 2348 9510

International Journal Of Core Engineering & Management(IJCEM)
Volume 1, Issue 2, May 2014

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