



In the Perception of Employees: Impact of Organizational Culture on the Costing and Productivity of a Manufacturing Unit

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ABSTRACT

In recent years quality manufacturing is growing in exponential way. The quality manufacturing plays very important role in the success or failure of manufacturing unit. These units measure their performance in the terms of quality and reliability manufacturing of the products. For this purpose manufacturing should follow quality models, guidelines, six sigma as well as employees technical skill. The perception of employees is also important for quality output. Perceptions of work conditions have proven to be important to the well-being of workers. The team work is the key for efficient production. The team work is directly related to the work culture of manufacturing unit(s). It is well known that the profit of any company is correlated with employee attitudes and perceptions of work conditions, but still research in this direction is not has been focused. So, this paper identifies the issues related with employees and work culture and then establishes the relationship among them.

KEYWORDS : Manufacturing, Organizational Culture, Six-sigma, Team Effectiveness, Assessment Measure.

1 INTRODUCTION

Manufacturing is a crucial component of the foundation that maintains the security, health, and wealth of any country. Quality manufacturing plays key role in terms of factory performance. One of the most important measure to determine the factory performance is, the factory cycle time, which means delivering the right product at right place at right time. These days the performance measure of the manufacturing units (load-adjusted cycle-time efficiency) remains more or less the same as it was half a century ago. Although the goods produced in the factories have evolved in terms of sophistication, reliability, the time spent in their complete production remains almost the same with only 5-20% decrement. So due to this reason there is enormous scope for improvement in the running of almost any manufacturing unit in any country. Lean manufacturing, six sigma, reengineering, theory of constraint are the works done previously in this field which can improve the performance of any manufacturing unit when and if applied properly. These techniques are mostly related to technical aspect of production. Other aspect of production which is responsible for the success of any organization is human factor, without which no software is of any use, and no machine would even work. The success of any business depends on appropriate, effective, well-communicated, HR and business practices, where the importance of team effectiveness and organizational culture cannot be neglected. This paper focuses to find out how team effectiveness and positive organizational culture would affect the cost and productivity of any manufacturing unit. So a relationship between the performance of the employees and organizational culture can be established. The paper shows that organizational culture has an impact on productivity and costing of any manufacturing unit and for this purpose two HR tools viz. Team Effectiveness Assessment Measure (TEAM) and OCTAPACE is used. The TEAM is used for assessing team effectiveness in an organization while OCTAPACE is used for assessing the organizational culture.

1.1 Purpose of study

The main purpose of the study is to study the relationship between the organizational culture with the productivity and costing of a manufacturing. The present research will mainly focus on human as a factor of productivity. The present study will focus on parameters like Openness, confrontation, trust etc. and also other characteristics of a team, and determine to what extent these factors can affect the productivity, performance and thus costing of an organization.

1.2 Rationale for research

There has been a lot of researches in the direction of improving the

efficiency of a manufacturing unit and reducing the cost of production using different techniques like Lean manufacturing, six sigma, reengineering, theory of constraints these researches mainly aims at improving the efficiency of a manufacturing firm by improving the technical aspects of production like processes, techniques etc., but till date there no research has been which can relate the team effectiveness and organizational culture with the costing of a manufacturing unit. This research aims at establishing the relationship between the positivity in the organizational and productivity and performance and also costing with special reference to the manufacturing units.

1.3 Objective of research

- 1 To study how culture of an organization can affect the costing of a manufacturing firm.
- 2 To study how organizational culture can affect the productivity of a manufacturing firm.

2 LITERATURE SURVEY

The viewpoint of Beeman, Don R. Sharkey, Thomas W (1987) focused that one of the most difficult circumstances for a manager is to be suddenly transported into a significant position in a highly politicized organization. In a very short time, the manager will be wondering whether such a situation can be anything except a no-win situation. This article explains the foundations of political behavior, identifies highly political situations, and provides the new manager with the tools to deal with negative political behaviors. A new manager is in a situation when entering a new job, with high levels of complexity and competition. One of the first assessments the new manager must make is the intensity of the political behavior in the new organization.

M. Brunett, C. Cook and G. Rothermel (2004) described that today the end-user programming has become the most common form of programming, but still there has been a little investigation into the dependability of the programs end users create. This is of critical importance and very problematic because the dependability of these programs are very important, as in certain cases, errors in end-user programs, such as formula errors in spread sheets, have cost millions of dollars. So here this problem is being dealt by developing a software engineering paradigm viable for the end-user programming, an approach called end-user software engineering.

The authors R.Y. Chang, A. Podgurski and J. yang (2007) described that neglected conditions are an important but difficult to find class of software defects. This paper presents an approach to reveal the neglected

conditions that integrates static program analysis and advanced data mining techniques to discover implicit conditional rules in a code base and to discover rule violations that indicate neglected conditions. In this approach the user is required to indicate minimal constraints on the context of the rules to be sought, rather than specific rule templates, and to permit this generality, rules are modeled as graph minors of program dependence graphs, and both frequent item set mining and frequent sub-graph mining algorithms are employed to identify candidate rules. The results are reported, of an empirical evaluation of the approach in which it was used to discover conditional rules and neglect conditions in ~25,000 lines of source code.

According to Shen-Wen Cheng(2008), in today's scenario, the systems must have ability to self-adapt to the changes in their environment. But the existing systems require human oversight or are limited in the kinds of system and set of quality-of-service concerns they address. This approach uses software architecture models and architectural styles to overcome the limitations of the existing systems. The target system and its environment is monitored by the engineering approach and framework of mechanism provided by the approach. It reflects the observations into a system's architectural model detect scope of improvement select a course of action and effect the changes in a close loop. The infrastructure provided is general and reusable with well-defined customization, which allows the engineers to systematically customize the approach to particular systems and concerns. Some concepts are referenced from Goodman et al. 1986, 1987, Parker 1990, 1994, Orsburn 1990, Fisher, K. 1993, Stevens 1994.

3 RESEARCH METHODS AND PROCEDURE

Here we discuss about the research methodology which will be used in this research project, establishing a framework for collection, analysis and interpretation of primary and secondary data.

3.1 Research Design

Research needs a design or a structure before data collection or analysis can commence. A research design is not just a work plan. The function of a research design is to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible. Both exploratory and descriptive research will be used in this project to identify the problem areas, analyze those problems and then to find solution to those problems.

3.2 Research Question

Issues related to the how team-effectiveness and organizational culture can affect the productivity and thus the costing of an organization is a matter of debate all across the world. To what extent can efforts made towards improving the teams and making organizational culture increase the efficiency of the organizations and how much is it worthwhile to spend money and resources in this area is still a big question. Against the above background, following questions have been framed:

- 1 What impact does team effectiveness has on the costing and productivity of a manufacturing unit?
- 2 Can culture of an organization have an impact on the costing and productivity of a manufacturing unit?

3.3 Data Collection Procedures

Keeping in view the attributes of the sample chosen by us, the data was collected by structured Questionnaire and Interviews. Respondents were approached personally and were requested to provide the required details. Questionnaires were also filled by getting the required information if the respondent was not having appropriate time to fill it. The respondents were interviewed personally using OCTAPACE and were asked to rate their organization according to their perception based on the parameters given in the questionnaire.

3.4 Data Analysis

Data analysis and interpretation tools and techniques are decided keeping in view the nature and type of data collected. So in this research, IBM SPSS 19.0 and Microsoft Excel are used for the analysis of data.

3.5 Hypothesis testing

Hypothesis is used to establish whether the difference exhibited by random samples can be inferred to the population from which the samples have originated.

- 1 **Null hypothesis:** There is no correlation between costing and productivity of manufacturing units and the organizational culture.
- 2 **Alternative hypothesis:** There is a correlation between the costing and productivity of manufacturing units and team-effectiveness and organizational culture.

4 RESULT AND ANALYSIS

The correlation between performance and various dependent attributes is analyzed (Figure 1). The dependent attributes are interaction amongst employees, genuine sharing of information and feelings in a meeting, free discussion and communication and discussion between seniors and subordinates, analysis of interpersonal problems, the tendency of passing the buck on others when there is a problem, tendency to surface the problem, interpersonal contact and support among employees, tendency to confide in seniors, tendency of team members to fend themselves when there is a problem, congruity between feelings, tactfulness, tendency to owe up mistakes, encouragement of subordinates, tendency of consideration, prevention is better than cure, supervision of employee, tendency of subordinates, the feeling of team work, the tendency to accept, employee's involvement in developing organizational mission and goals, the tendency of employees, performance and thinking, performance and experimentation.

4.1 Result for hypothesis

Null hypothesis was that "There is no correlation between costing of manufacturing units and team-effectiveness and organizational culture", but results showed that the team-effectiveness and organizational culture have relationship with the performance of any manufacturing unit, thus indirectly it also has relationship with the costing of manufacturing units. So, the null hypothesis is rejected.

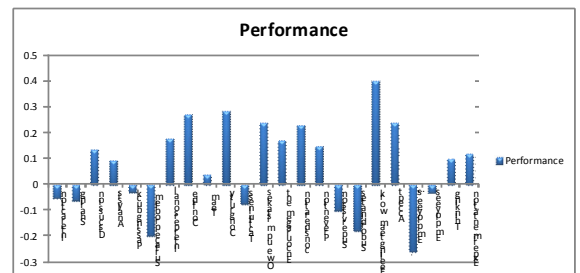


Figure 1: Correlation between performance and dependent variables

4.2 Analysis

- 1 Free interaction amongst the employees decreased the performance of the team. Managers at different levels didn't want their subordinates to interact much at the work place.
- 2 Employees believed that if they genuinely share thoughts and feelings in meetings, it would negatively affect their performance. They were reluctant in sharing feelings with each other and specially their seniors in the meetings
- 3 Free discussion and communication was considered to be vital for the performance of an organization. Employees wanted a culture of free discussion and communication in their organization.
- 4 Deep analysis of problems was considered to be vital for good and consistent performance in the long run. In general, the employees were of opinion that if the problems were surfaced it would create a problem in future.
- 5 The culture of passing the buck on each other hindered the performance of an organization.
- 6 Interpersonal support and contact among employees is vital for the performance of an organization.
- 7 For the performance of a team in an organization, feeling of trust and confidence between the seniors and the subordinates is very important.
- 8 It was found that employees believed that if the performance is low they have to fend themselves.
- 9 People believed that within a team if there is a congruity between expressed behaviors and actual feelings, it would increase the performance of the team.
- 10 People think that using tactfulness and manipulation for getting things done would adversely affect the performance of a team.
- 11 The culture of owing up mistakes in an organization was vital for

the performance of an organization.

- 12 Managers at different levels were of the opinion that too much freedom to their employees to take independent actions relating to their jobs would decrease the performance of their team.
- 13 At the same time, the employees didn't like the tendency of their seniors to over supervise them and direct them from time to time.
- 14 Employees wanted they should be given some freedom so as to handle certain problems on their own. They found it useless to check out with their seniors, for every small problem.
- 15 Performance showed highest degree of correlation with team work and team spirit. People believed that team work and team spirit was the most vital thing for the performance of an organization.
- 16 Managers at different level believed that the employees should not be involved in setting organizational goals and missions, as it would decrease the performance of the teams.
- 17 The managers believed that although experimentation and innovation in doing things is important, too much of it would risk the stability of an organization, which would be a threat to the organizations existence in today's competitive world.

5. CONCLUSIONS

The main points are as follows with respect our work in the Perception of Employees w.r.t Impact of Organizational Culture on the Costing and Productivity of a Manufacturing Unit

- 1 To much of interaction among employees in a manufacturing firm can reduce the performance of the unit. It can thus increase the cost related to time factor and per unit cost due to decreased productivity.
- 2 Employees are afraid to come up openly regarding their true feelings about any problem or issue in front of their seniors in meetings. They tend to manipulate things in the meetings as they feel

that frank expression of feelings might become a threat in future. This could result in employees hiding very important facts about low performances of teams or actual potential of a particular team in terms of productivity and thus the problem may continue to persist for a long time, adversely affecting the profitability.

- 3 If there is a culture of trust and amicability in an organization, the processes flow smoothly, saves time and energy, increases the performance of the teams as well as reduces the cost related to time factor and wastage.
- 4 Greater coordination and effectiveness in teams would result into better productivity due to increase in performance hence greater profitability of the firm. This would further reduce the cost per unit.
- 5 Fixed cost factor can only be overcome with the help higher productivity levels in a manufacturing unit. To realize economies of scale, team work and coordination is of great importance.
- 6 Feeling of trust, confidence and mutual understanding between the seniors and subordinates can increase the profitability of a firm by motivating the employees for higher performance and timely redressing of their grievances which could hinder work flow.
- 7 Giving employees a degree of freedom regarding decision making on their own to some extent may prevent delays in complexities of routine nature.
- 8 The involvement of employees in setting goals and missions of an organization might not prove to be a very wise decision as the employees might seek their own comfort in setting the goals and missions of their organization and neglecting the organizational needs and objectives.
- 9 Experimentation and innovation is not always considered good as going by already set rules and methods of solving a problem reduces time required for solving it and also the chances of errors.

REFERENCES

- [1]. Shen-Wen Cheng(2008), "Cost effective software architecture-based self-adaptation". Carnegie Mellon University. | [2]. R.Y. Chang, A. Podgurski and J. yang (2007), "Finding what's not there: a new approach to revealing neglected conditions in software.", "Proc. ACM Int'l symp. Software Testing and Analysis", p 163-173. | [3]. M. Brunett, C. Cook and G. Rothermel (2004), "End-user Software Engineering," "Communications of ACM", p 53-58 vol. 47 issue 9. | [4]. Beeman, Don R. Sharkey, Thomas W (1987), "The Use and Abuse of Corporate Politics", "Business Horizons" p26 vol. 30 issue 2 | [5]. McGregor, D. The Human Side of Enterprise; McGraw-Hill: New York, NY, 1960. | [6]. Likert, R. New Patterns of Management; McGraw-Hill: New York, NY, 1961. | [7]. Parker, G.M. Cross-Functional Teams; Jossey-Bass Publishers: San Francisco, CA, 1994. | [8]. Parker, G.M. Team Players and Teamwork: The New Competitive Business Strategy; Jossey-Bass: San Francisco, CA, 1990. | [9]. Goodman, P.S.; Ravlin, E.; Schminke, M. Understanding groups in organizations. Research in Organizational Behavior; JAI Press: Greenwich, CT, 1987; Vol. 9, 121-173. | [10]. Goodman, P.S.; Ravlin, E.C.; Argote, L. Current thinking about groups, setting the stage for new ideas. Designing Effective Work Groups; Jossey Bass: San Francisco, 1986. | [11]. Orsburn, J.D.; Moran, L.; Musselwhite, E.; Zenger, J.H. Self-Directed Work Teams: The New American Challenge; Business One Irwin: Homewood, IL, 1990. | [12]. Stevens, M.J.; Campion, M.A. The knowledge, skill, and ability requirements for teamwork implications for human resource management. J. Manage. 1994, 20 (2), 503-530. | [13]. Fisher, K. Self-Directed Work Groups; McGraw-Hill: New York, NY, 1993. |