Study on the Key Factor Parameters to Increase Productivity in Construction and Manufacturing Industries.

K. Almazyed*1, A. Alaswad*2 and A.G. Olabi*3

*School of Engineering and Computing, University of the West of Scotland, Paisley, PA1 2BE, UK,

Email: 1B00263653@studentmail.uws.ac.uk, 2abed.alaswad@uws.ac.uk, 3abdul.olabi@uws.ac.uk

Abstract. Proper management of human and non-human resources in construction and manufacturing projects can give-in considerable savings in time and cost. Construction and Manufacturing industry faces issues in connection with problems related with productivity and the problems are usually connected with performance of employees. The performance of employees is affected by many factors. In this paper a survey was made on respondents who are employed various projects of Saudi Arabia. The researcher developed a theoretical framework from the existing research which was used as a Model to collect and analyze the field data to test the hypothesis. In this research activity three predictors (commitment, job satisfaction and job performance) for determining the change in productivity. The results highlight that commitment and job performance (respectively) are the two predictors which are explaining 37% of variation in the productivity of the companies. The results also show that Job Satisfaction has no role in the prediction of productivity.

Keywords: commitment, job satisfaction, job performance and productivity.

1. Introduction

Different factors on organizational productivity are being discussed within last 30 years. Today the aspect of organizational commitment, job involvement and job satisfaction are considered as the critical factors for an organization’s overall productivity. Job satisfaction is the extent to which employees like their work. Therefore it plays a vital role because many research studies show that individuals leave an organization if they are dissatisfied with their job [1]. Once an individual has joined an organization, a valid measure of his or her overall job satisfaction should be the single most important information a human resource manager must have about that person. This assertion has so far gone unchallenged because researchers and practitioners turn to associate job satisfaction with productivity [2]. Organizational commitment is a significant force to improve the productivity simply by increasing the involvement of each employee. Furthermore a person who is involved in his/her work for a long segment of time, that work or job affects his/her quality of life [3]. Job performance is related with how a given individual performs and usually depends on ability to do the work, level of effort, and support given to that person. Recruitment and selection of individuals are directly connected to the
abilities of persons to perform tasks, innate ability, which involves choosing the person with the right talents and interests for a given job. The efforts exerted by the workforce for the performance of their duties are influenced by many HR issues, such as motivation, incentives, and job design. Management support includes training, equipment provided, knowledge of expectations, and perhaps a productive team situation [4].

2. Literature review

2.1 Concept of productivity

Productivity is a measure of total efficiency of a production process. At the company level, typical productivity measures are such things as worker hours, materials or energy per unit of production [5]. Productivity is a crucial factor in performance of firms and nations. Increasing national productivity can raise living standards because more improves people’s ability to purchase goods and services, enjoy leisure, improve housing and education and contribute to social and environmental programs. Productivity growth also helps businesses to be more profitable [6].

2.2 Commitment and productivity:

Organizational commitment manages the relation between organization and employees and explains how employees are emotionally involved to organization. In addition, it plays key role for an individual and organizational performance. For that reason all organizations must widen an emotional tie between employees and the organization in the shape of organizational commitment in order to create total attachment of their workforce towards their targets, concerns and usefulness [7]. There is a positive association between commitment and productivity. Employees commitment controls low yield and generates high performance. Extremely committed employee has a dim intention to leave the organization. Committed workers apply more efforts towards its success and therefore are also likely to exhibit better performance [3].

2.3 Job satisfaction and productivity:

Job satisfaction is an important characteristic of all employees. The impacts of job satisfaction on employee’s outcomes are generally explored in the literature. Job satisfaction has a positive consequence on performance [8]. According to [9] job-satisfaction leads to higher productivity. Performance or productivity leads to rewards and satisfaction which then push the men to more efforts because of high perceived expectancy and it further leads to higher productivity which again leads to satisfaction in a circular relationship [1]. Some researchers argue that job satisfaction is the emotional state created by the balance between rewards and expectations of a worker from his/her job, for example, if employees feel that they are treated unfairly, receive less rewards, they are more likely to have a negative attitude toward their work, boss or coworkers [4].

2.4 Job performance and productivity:

Job performance reviews whether a person performs competently. Assessments of individuals are undertaken to identify their strengths and weaknesses in order to plan and initiate training programs for most favorable appointment decisions [10]. Most of the productivity improvement endeavors are directed towards employees. According to [8] Employees’ job performance can be improved via making workers more efficient with capital equipment. Different research
studies have shown that the less spent on equipment per worker, the less output per worker will give. In order for workers to work in a better manner, management must extend its help to workforce by replacing outmoded methods and rules, or find better ways of training people to work more efficiently and some work can be redesigned to make it faster, easier, and possibly even more rewarding to employees [4].

2.5 Theoretical framework
Figure 1 represents Theoretical Framework, it includes commitment, job performance and job satisfaction, which would lead to productivity improvement.

![Theoretical Framework](image)

Figure 1 Theoretical Framework

3. Methodology

Approach (Survey)
The surveys are the best tools for recording attitudes in large populations. Both literature and field surveys have been used to collect data for this research paper.

Population and Sample
The population of this project includes all the respondents between management and workers in an engineering firm of both the public sector and the private sector organizations in Saudi Arabia. A sample of 150 employees including workers, managers, Saudis and non-Saudis was selected via convenience sampling technique.

Data Collection Methods
In this research paper both literature surveys as well as field survey were used. Literature review was undertaken to extract the concepts (variables and attributes) as suggested by the experts and researchers on organizational productivity. Then these concepts were used to develop theoretical framework (mentioned in literature review section) for the generation of hypothesis and its empirical testing.

Data Analysis Tools
Regression analysis was used to measure the cause and effect relationship. The hypothesis was about the relationships between research variables (predictors and criteria).

4. Findings
Table 1 below presents the Hypothesis: predictors determine the criterion variable.
Multiple Regressions, these findings are presented, analyzed and discussed below.

Table 1 Presents the Hypothesis: Predictors determine the criterion variable

| Dependent variable | Independent variables | R    | $R^2$ | df  | F-value | Beta Score | Sig  |
|--------------------|-----------------------|------|------|-----|---------|------------|------|
| Productivity       | Job satisfaction      | .612 | .37  | 4   | 22.412  | .089       | .292 |
|                    | Job performance       |      |      |     |         | .557       | .000 |
|                    | Commitment            |      |      |     |         | .399       | .000 |

Multiple Regressions

The commitment and job performance (respectively) are the two predictors which are explaining 37% ($R^2$=.37) of variation in the productivity of the construction and manufacturing companies. In the above table $R=.612$ is the correlation of the three independent variables with the dependent variable. The calculated Coefficient helps us to see which of the three independent variables bring most of the variance in the productivity. In the Beta column, we see that the beta is .557 for job performance; .399 for commitment, which is significant at .000 levels. The positive Beta weight indicates that for the productivity of organizations, job performance, job satisfaction and commitment are indispensable. Results indicate that Commitment and job performance are the main predictors for the productivity. Job Satisfaction has no role (with p-value .292 greater than the threshold value .05.) whatsoever in the prediction of productivity. Commitment and job performance as major dynamics of productivity means workforce with striking benefits will want to serve the company for a longer period of time thus the employees try to develop and maintain good relations with the co-workers and management as well. Further the Job performance as determinant of productivity discloses that respondents support the statement that their company offers proper remuneration, they have complete job security, satisfaction with work-hours and they are ready to serve the very organization for a long time period. Decision: hypothesis is substantiated

5. Discussions:

The empirical study of the native working environment for construction and manufacturing sector workforce like managers, workers, Saudis non-Saudis public and private sector employees in Saudi Arabia, produced a ‘Customized and tailor-made’ version of these critical factors. According to [8] the more committed worker performs his/her job well. The field study shows that commitment and job performance are the two critical factors determining the productivity in companies of Saudi Arabia while the factor Job Satisfaction is not significant in defining the productivity of companies [9]. The significance of the relationship between ‘commitment’ and ‘productivity’ shows that committed employees try to develop and maintain good relations with the co-workers and the management which makes them to serve the organization for a longer time period. Thus productivity is gained as workers serve the organization for a longer time period, employees and management have good relations and company communicates all future plans to their employees [11]. Job performance as predictor of productivity shows that Proper remuneration, complete job security and satisfaction with work-hours generate employees’ strong belief in organizational objectives and ultimately generates productivity [4].
6. Conclusions

Conclusions are the judgments, evaluations and decisions about different dimensions (critical factors) of the issue based on the findings of the study. As discussed in the previous section, both literature-based and empirical findings provide sufficient proof to demarcate the boundaries of global issues in the frames of native and local environment. From the data analysis it is concluded that committed employees serve the organization for a longer time period because management treats them well, offers them attractive benefits, committed personnel always try to have good relations with co-workers that is the reason that all the work-groups have close relations. A committed employees will give maximum productivity as they have strong belief in organizational objectives and they possess competency also. The results also highlight that Job performance plays a vital role in defining the productivity because employees getting proper compensation and holding satisfaction for work-hours make them to work in a stress less manner. In order to perform their job effectively Company communicates all future plans to them which in result establishes good Employees-management relations.

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