

## Sudanese Small and Medium Sized Construction Firms: An Empirical Survey of Job Turnover

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### ABSTRACT

In construction industry, job satisfaction and job performance are important issues when studying the human behaviours and attitudes of personnel. This research is very important so as to understand what management needs to do in order to avoid personnel job turnover in the organization. The construction industry in Sudan faces a variety of problems relating to human resource efficiency which in turn affect the entire productivity in the industry. The objectives of this study are to view the job analysis of personnel in the Sudanese construction firms, identify the level of job satisfaction of personnel, and identify the level of job performance of personnel and to investigate the relationship between job satisfaction and job performance of personnel. Data was collected from personnel in six Sudanese construction firms through survey packets including a data form and modified version of the Job Satisfaction Index questionnaire (JSI) and Performance Rating Index questionnaire. The data was analyzed using the Statistical Package for Social Sciences (SPSS) software and also Average Index. The study shows that there exist weaknesses in the job analysis of personnel. The level of job satisfaction and performance of personnel in Sudan was found to be on the 'average'. The study also shows a positive relationship between personnel job performance and job satisfaction.

**KEYWORDS:** Job satisfaction, Job performance, Job analysis, Construction, North Sudan, South Sudan

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### 1. INTRODUCTION

Developing the capabilities of human resource and retaining them in organizations for a sustained period of time is turning to be a great challenge for construction firms in the small and medium sized enterprise sector. This effort requires sound and competitive human resource practices such as training and development to be grounded by business organizations to ensure personnel growth and systematically reaping benefits from skilled and well trained personnel to ensure efficiency and effectiveness in the construction industries. As investigated by [6, 10] that human resources are found to be very competitive for all types of business organizations and considered as a veritable tool possessed by an organization. Consequent upon that, recruiting skilled human resource is shaping up as a challenge in this competitive business arena and retaining a skilled human resource even has become an internal competitive challenge for all organizations world-over.

In view of these, the construction industry in Sudan has become one of the most dynamic sectors in the country and has experienced real growth over the past few decades. However, the activities of the sector became more intense as a result of the discovery of crude oil in the country. Construction industry is an important sector which plays a prominent role in both developed and developing nations through the creation of employment, provision of social infrastructures such as bridges, highways, hospitals, schools, water resources, energy, residential and commercial centres, hence, contributing to the gross domestic product (GDP) of those countries [42]. In the construction industry, Job Satisfaction is a very crucial when studying Human Behaviours and Attitudes. As viewed by [13], job satisfaction is "the collections of feelings and beliefs that people have about their current job". They go further to opine that if job satisfaction studies are properly planned and administered, they will usually produce a number of significant benefits, both general and specific. One benefit of attitude studies is that they give management an indication of general levels of satisfaction in a company.

### 2. LITERATURE REVIEW

#### 2.1 Small Medium Sized Firms

Musa and Danjuma [28] reported that the small and medium scale enterprises (SMEs) have been generally acknowledged as the bedrock of the industrial development of many nations. Apart from the numerous goods and services produced by SMFs, they provide a veritable means of large scale employment, as they are usually labour

intensive. As put forward by [24, 1] the Small and medium sized firms (SMFs) are also a source of economic development through its vast creation of employment, wealth creation and innovation by introducing competitive strategies which set them apart from other firms. They also provide training grounds. For entrepreneurs even as they rely on the use of local raw materials. Effective management of the SMEs can gradually transform into giant corporations and multinationals of the future. These contributions thus explain why government and international agencies mobilize efforts towards the realization of sustainable industrial growth and the creation of mass employment through the rapid growth and development of the small and medium enterprises (Nnanna, 2003) as cited in [28]. These include their ability to re-engineer products and service delivery to meet clients' demand by putting in place innovative techniques or development of new strategies.

Yang and Yu [43] recognized that the employment opportunities they create improve the livelihood of a large percentage of citizens of any nation. The importance of SMFs is often being overlooked by commentators [18], whereas most economies that drive towards industrial development is dependent on the growth of small and medium sized firms considering its large numbers and structure which under adequate conditions gives them the flexibility and ability to stand adverse economic situations. SMFs are also considered by many to be an integral part of any healthy economy considering the role they play in the creation of jobs and the fostering of innovation. Nevertheless, in the long run their importance as a provider of employment is evident and, for this reason alone, SMFs are necessarily of interest to those concerned with employment relations and considered to be critical to organizational [12] and performance improvement in order for them to gain competitive advantage [30].

## 2.2 Job Satisfaction

Contemporary research revealed that job satisfaction is the most studied field of organizational management, personnel and human resource management, industrial-organizational psychology, social psychology, organizational behaviour [15, 36]. Okpara *et al.* [31] found that Job satisfaction is of wide significance to researchers because of its effects on most organizational members, as majority of people spend considerable part of their lives working. Hence, the need to investigate the factors involved in job satisfaction is of significant value to improving employee happiness at the work place [32]. As reported by [26] happy employees are productive while unhappy ones are not, as a result, success of an organization depends on the level of satisfaction of their workforce.

It is generally agreed upon by researchers to be an effective reaction to a job that results from the employee's comparison of actual outcomes with those that are desired [35]. Job satisfaction has been recognized as one of the most researched human resource field which is of serious concerns to many organizations. It is however, a set of favourable feelings and emotions to which employees view their work [35]. Efforts in researching more into this area has continued for a number of reasons; firstly, employee behaviours- job search activities, job turnover, absenteeism and performance effectiveness; second, features of the workers role-autonomy and task, job variety, job identity, role conflict and ambiguity; and finally, personal character of the member of staff- age, sex, need for achievement, and job tenure [2]. Higher job satisfaction among employees enables them to put more efforts for greater good of the entire organization.

## 2.3 Job Analysis and Performance

Previous authors [17, 29] identify job analysis as a tool that provides information about the basic aspects of a job, which are; job description and job specification. They go further to emphasize that these information are very useful to determine who should perform any particular task. Job analysis information is important to establish the performance standards and performance appraisal. Several authors such as [26, 37] opined that job specification is derived from job description and that it identifies the experience, qualifications, skills, abilities, knowledge and special requirements needed to successfully perform a task. They specify that job specification identifies what kind of candidates need to be recruited and how they should be assessed. The job specification may be incorporated into the job description form or documented separately. Several authors postulated that Job satisfaction is a "pleasurable or positive emotional state resulting from an appraisal of one's job or job experiences" [22]. Job satisfaction is valuable to this study for many reasons: (i) promoting a staff's satisfaction has an intrinsic humanitarian value [38, 39], (ii) an improved productivity is a function of the level of satisfaction; (iii) improved life satisfaction. Any of these outcomes is attractive in organizations, and as such shows the consequence of studying and understanding job satisfaction. Armstrong [3] defines performance management as "a way of achieving enhanced individual outputs", within an established structure and which also leads to organizational achievement and rewards for workers. Bacal [7] postulates further that performance management is a system, which should be linked to a greater organizational system, which is, related to amongst others organizational performance versus individual employee outputs, rewards and recognition systems within the organization.

## 2.4 Job Turnover

Empirical findings reported that job turnover has witnessed several research attention among human resource experts in many countries, and as a result different implications have been drawn;(i) turnover may have

positive and negative effects on employees' career, and their self-concept about their job. It affects the "stayers" and as well as the "leavers" [40, 19], (ii) Turnover is expensive and affected companies should document these costs cautiously. Finding suitable replacements, companies would need to accept both the financial and non financial implications of recruiting and training of new personnel. (iii) it may have a positive impact on organizations. Majority of scenarios as found by previous studies, turnover do create opportunities for promotion, hence, infusing new ideas and technology through replacements, inspiring changes in policy and practice and removing poor performers [41]. (iv), lack of job turnover may create its own set of problems-blocking career development paths, entrenching out-dated methods, and accumulating poor performers [11]. Two types of job turnover: voluntary and involuntary turnover exist [14, 16, 20, 21, 25, 27, 34]. Price [34] defined voluntary turnover as the movement across the membership boundary of an organization as a choice by the employee, whereas, the involuntary turnover is discussed as a movement across the membership boundary of an organization other than the choice of an employee.

Notwithstanding the abundant studies that grouped the reasons personnel change jobs and suggest systems to control the extent of turn through creating a favourable atmosphere, which offer motivation and opportunities to employee growth through training, yet, no standard reason could be ascertained from empirical survey to explain why people leave the organization [33]. As identified by [23] low wages, inadequate benefits, lack of career advancements, lack of union representation, poor relationship with management, poor understanding of the job, lack of proper training and poor working environment, are the eight variables he considered as crucial to employee turnover, and more reasons were highlighted by [4] which include hiring practices, managerial styles, lack of recognition, lack of competitive compensation systems and toxic workplace environments. The other kinds of job turnover factors are related to the individual work variables such as job satisfaction with pay, promotion and work condition [5]. Boxall et al. [8] also concluded that the main reason of turnover among employees was more interesting job elsewhere. All these empirically established reasons provides the basics to control the employee turnover through minimizing the extent and impact of these classified reasons, yet, empirical findings are required from various developing and conservative economies to ascertain the true factors that impact significantly on employee turnover intentions [9].

### 3. Problem Statement

In the Sudanese construction industry, based on several research by industry experts it has been widely reported and observed that there are certain problems inherent in employee performance and as a result affects organization's total productivity such as; quality of work, duration of projects and finally on firm's profits. The study seeks to find out what factors make the personnel satisfied and make them able to perform? Do job satisfaction influence job performance? Does the attitude of the personnel have any influence on their performance outcome?

### 4. Research Methodology

Based on in-depth survey of relevant studies intended to find out the current state of job satisfaction and performance issues. A total of 150 questionnaires were sent out to randomly selected employees of small and medium construction firms in both South and North Sudan and 107 questionnaires were returned, which is a return rate of 71.3%. The questions are grouped into four sections; section A is to access the demography of the respondents, section B is to access the job satisfaction, section C is to access the job performance issues and section D to examine the state of job management. Mean score analysis was adopted to rank the various factors significant to job satisfaction and performance while correlation was used to examine the significant relationship between the job management variables.

## 5. RESULTS AND DISCUSSIONS

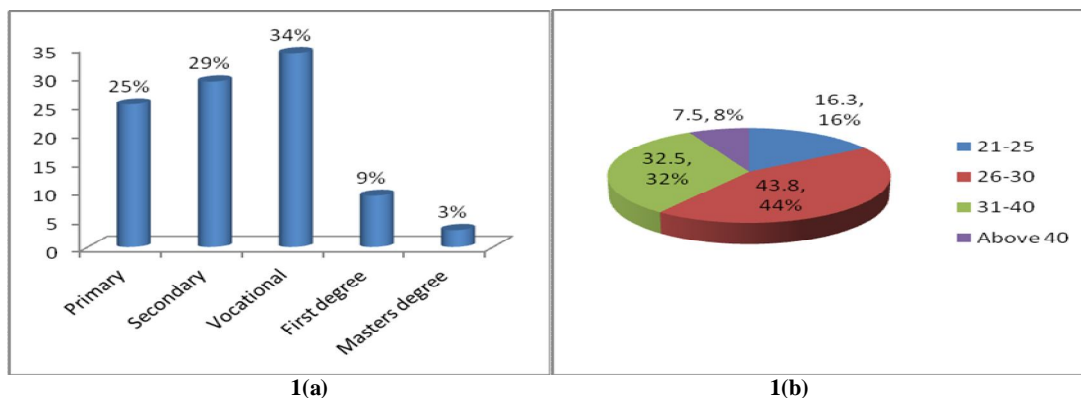


Figure 1(a) (b). Educational and Age distribution of the respondents

Figure 1(a) above shows the Education distributions of respondents are primary 25%, secondary 29%, vocational 34 %, first degree 9% and masters degree 3% While, Figure 1(b) shows Age Distributions of the respondents are 21-25 (16.3%), 26-30 (43.8%), 31-40 (32.5%), above 40 (7.5%).

**Table 1.** Mean score ranking of factor significant to job satisfaction

	Mean	SD	Rank
Satisfaction with working hours	3.58	0.825	1
Satisfaction with co-workers	3.58	0.893	2
Satisfaction with job advancement	3.48	1.111	3
Satisfaction with benefits	3.46	1.212	4
Satisfaction with working conditions	3.35	1.008	5
Satisfaction with supervisors	3.33	1.024	6
Overall satisfaction	3.06	1.305	7
Satisfaction with job security	2.83	1.080	8
Satisfaction with pay	2.67	1.184	9

Table 1 shows the mean score ranking for factors significant to job satisfaction from the responses of the respondents. Satisfaction with working hours ranked highest with a mean score of 3.58 while satisfaction with pay ranked the lowest with a mean score of 2.67.

**Table 2.** Mean score ranking of factors significant to job performance

	Mean	SD	Rank
Accepting responsibility for own behaviour	3.75	0.711	1
Personal appearance	3.67	0.879	2
Skills in planning	3.56	0.998	3
Observance of rules and regulations	3.54	0.959	4
Willingness to perform duties	3.38	0.932	5
Amount of work performed	3.37	1.030	6
Making a high impression	3.37	0.768	7
Quality of work	3.33	1.080	8
Observance of rest and lunch periods	3.27	1.087	9
Acceptability of completed work	3.13	0.991	10
Completion of work on schedule	3.08	0.904	11
Ability to organize and schedule workloads	3.06	0.802	12
Dependability	2.98	0.828	13
Attendance and promptness	2.96	1.120	14
Effort applied	2.90	1.034	15
Technical competence	2.88	1.003	16
Adaptability	2.88	1.114	17
Overall effectiveness	2.79	0.977	18
Propensity to leave	2.46	0.803	19

Table 2 shows the mean score ranking for factors significant to job performance from the responses of the respondents. Accepting responsibility for own behaviour ranked highest with a mean score of 3.75 while satisfaction with Propensity to leave the lowest with a mean score of 2.46.

**Table 3:** Correlation between overall job satisfaction and overall job performance

		Overall effectiveness
Overall satisfaction	CorrelationCoefficient	0.471**
	Sig. (2-tailed)	0.000
** Correlation is significant at the 0.01 level (2-tailed).		
a. Listwise N = 107		

Table 3 shows that there is a positive relationship between overall job satisfaction and job performance in Sudanese construction firms. Furthermore, Table 4 shows the Intercorrelation, Means, and Standard Deviation for Job management, there exist a positive relationship of Experience Period and what is the nature of the direct supervisory responsibility your job has? (0.00), Do you provide standard job description to your employees before engaging them to the job? Considering other variables, except how many reports do you handle daily? Do the employees follow the job description if you have it? And others except how many reports do you handle daily? And finally do you conduct evaluation for your employees?

**Table 4: Intercorrelation coefficient, Means, and Standard Deviation for Job management**

	1	2	3	4	5	6	7	8	M	SD
Experience Period	--	0.15	0.02	0.11	-0.02	0.54**	0.20	0.01	5.31	2.26
Do you provide standard job description to your employees before engage to the job	--	--	0.65**	0.58**	0.49**	0.39**	0.06	-0.57**	3.46	1.04
Do the employees follow the job description if you have it	--	--	--	0.75**	0.68**	0.33*	0.15	-0.63**	3.21	0.87
Do you conduct evaluation for your employees	--	--	--	--	0.79**	0.40**	0.26	-0.36**	3.21	0.78
Do you approve these performance evaluations	--	--	--	--	--	0.19	0.18	-0.46**	2.98	0.85
What is the nature of the direct supervisory responsibility your job has	--	--	--	--	--	--	0.26	-0.25	3.92	1.05
How many reports do you handle daily	--	--	--	--	--	--	--	0.00	2.46	0.54
Does your job description match your expected and the duties you are holding	--	--	--	--	--	--	--	--	1.60	0.50

**6. Findings and policy implications**

The job satisfaction and performance level of construction employees in Sudan (before break up) invariably reflects in their rate of productivity as buttressed by the findings which indicates a positive relationship between both variables. The findings also indicated that there is a dominance of the male gender among the employees as against the female gender in the workforce with mostly single, young, and agile age range of 26-30 years of age. This may be attributed to the religious perspective that women are not allowed in certain profession or probably they are expected to stay indoors. The mean score analysis for job satisfaction found that satisfaction with working hours was ranked highest (M=3.58, SD=0.825) while satisfaction with pay ranked lowest (M=2.67, SD=1.184) also, for job performance, accepting responsibility for own behaviour ranked highest (M=3.75, SD=0.711) while propensity to leave ranked lowest (M=2.46, SD=0.803). The construction personnel showed dissatisfaction with the working hours although the results suggests the pay is inadequate but constitutes a negligible factor in job satisfaction in the industry. The propensity to leave their present jobs is low which leads to poor work output.

However, accepting responsibility for own behaviour accounts for a major assessment in job performance. The results also showed that years of working experience is a determinant factor in the supervisory responsibility given to each personnel. Training into the job description, reports, and day-to-day evaluation forms a key factor to uplift the general job performance and satisfaction of personnel in the Sudanese construction industry. Top management of construction firms needs to provide fewer working hours in relation to remuneration and provide avenues to resolve issues relating to conduct of personnel. From the literature review which talked about job specification and description, and also looking at the findings where the issue of non-satisfaction with pay rate was mentioned, management are advised that for them to continue to retain the best personnel in their employ there is need to make remuneration commensurate with work including overtime work. There is a need to investigate what motivates employees since individuals are not usually motivated by same factors. Some maybe pay rise, others maybe position or holiday. Although a lot of other variables are investigated and indicated but may not be a dominant factor.

Dardar et al. [10] finding is consistent with some previous research which suggest that for organizations to limit the employee turnover intentions and maximize the employee job satisfaction, they must ensure that employee experience satisfaction through the provision of adequately designed training and development programs. Organizations must ensure the contents and design of the training offered, applied learning experience and knowledge to the employees, and organizations must also ensure that training is imparted by highly skilled and professional trainers and carried out in conducive, friendly environment to stimulate the passion of improving self-integrity, belongingness and pride. Rashid and Rashid [36] found that job satisfaction in academic faculty can be attained through enriching their jobs, which will ultimately bring creativity and innovation in their routine work, benefiting the students. Their career progression, achievement oriented, challenging responsibilities and collegial environment along with other fringe benefits enhance intrinsic satisfaction among faculty members that leads to improved teaching, high quality research and publications in educational institutions. They further found that in Pakistan employees prefer to have better pay package along with career development programmes, due to poor socio-economic conditions in the country. Further study should focus on the ways of improving the job satisfaction and job performance of the personnel in Sudan in a bid to overcome lapses in productivity as the industry moves towards sustained development.

On close observation by the interviewer because he is also a personnel in the industry, there was an observation and confession that as a result of lack of satisfaction among employees in the SMCFs in Sudan there

is a decrease in the level of quality of job delivered and the duration of delivery of jobs is deliberately delayed. This attitude affects negatively the reputation of the firm and may also impact on long term profitability of the organization. However, the quality of work delivered by small firms is low because they engage in cutting corners, making use of low quality materials, diverting construction materials and equipment, engage in side-jobs in order to make extra cash into their personal accounts and as a result clients seem to prefer large multinational construction firms than the small ones. From the findings of Abdullah *et al.* [1], we realised that employees are not happy with the general level of remuneration in the construction industry, meaning that the pay package in the industry is very low. As a result of this, the sector is supposed to experience a kind of labour turnover, where construction workers in the SME sector will seek for better paying employment in other sectors. But the findings happened to be contrary to this that is the reluctance to change job by employees despite that they are not satisfied with status quo. With this development there may be a lack of willingness to put in their best in the current job thereby reducing the level of productivity in the industry as a whole.

## REFERENCES

- [1] Abdullah, A., Bilau, A. A., Enegbuma, W. I., Ajagbe, A. M. and N.K. Ali, 2011. Evaluation of job satisfaction and performance of employees in small and medium sized construction firms in Nigeria. International Conference of Construction and Project Management. 16th-18th Sept. 2011 Singapore. Proceedings of the International Association of Computer Science and Information Technology. (IACSIT): 225.
- [2] Arora, N., Falade, T. A. and T.M. Nuseir, 2010. Effect size measurement of the meta-analytic influence of organizational climate on employee job satisfaction. Soc. Resp. Prof. Ethics, and Manage. 24-27 Nov. Ankara, 982.
- [3] Armstrong, M., 2004. A Handbook of Hum. Res. Manage. Practice.
- [4] Abassi, S. M. and W.K. Hollman, 2000. Turnover: The Real Bottom line. Pub. Personnel Manage. 2(3):333-42.
- [5] Arthur, D., 2001. The employee recruitment and retention handbook (1<sup>st</sup> Ed.) Amacom Ame. Manage. Ass. NY.
- [6] Butler, T. and J. Waldroop, 1999. The art of retaining your best people. Harv. Bus. Rev. 77(5):144-152.
- [7] Bacal, R., 2004. The busy learner's kit for marketing performance management & appraisal valuable.
- [8] Boxall, P., Macky, K., and E. Rasmussen, 2003. Labour turnover and retention in New Zealand: the causes and consequences of leaving and staying with employers, Asia Pacific Journal of Human Resource. 41(2): 196-214.
- [9] Cranny, C. J., Smith, P. C., and F.E. Stone, 1992. Job satisfaction: How people feel about their jobs and how it affects their performance. New York: Lexington Books, an imprint of MacMillan, Inc.
- [10] Dardar, A. A., Jusoh, A., and A. Rasli, 2011. Impact of training on job turnover: Evidence from contemporary literature. Interdis. J. of Contemp. Res. in Bus. 3(4): 425.
- [11] Dalton, D. R., and D.W. Todor, 1994. Turnover turned over: An expanded and positive perspective. Acad. of Manage. Rev. (4): 225-235.
- [12] Greasley, M. N., 2005. Employee perception of empowerment, employee relations, 27(4): 354-368.
- [13] George, J. M., and R.J. Jones, 2008. Understanding and managing organization behaviour. Eleventh Ed.
- [14] Gerhart, B., 1990. Voluntary turnover and alternative job opportunities. J. of Appl. Psy. 75(5): 467-476.
- [15] Gruneberg, M. M., 1979. Understanding job Satisfaction. London: The MacMillan press Ltd.
- [16] Gaudet, F. J., 1990. Labour turnover: Calculation and cost. New York, NY: Ame. Manage. Ass. Res. Stu. (39).
- [17] Hitt, D., Esser, J., and R. Marriot, 1998. Effects of delayed rewards and risk interest on intrinsic motivations. Bas. and Appl. Soc. Psy. 13 (4): 405-415.
- [18] Halil, Z., and Z. Selim, 2007. Measuring employee satisfaction in small and medium sized enterprises, congress on knowledge, management and economy, Istanbul, Turkey, Dec. 2007 Athens, Greece.
- [19] Hall, D. T., 1994. Careers in organization pacific palisades, CA; Goodyear publishing Company.
- [20] Iverson, R., 1999. An event history analysis of employee turnover. The case of hospital employees in

Australia, *Hum. Res. Manage. Rev.* 9(4): 397-418.

[21] Judge, T., 1993. Does affective disposition moderate the relationship between job satisfaction and voluntary turnover? *J. of App. Psy.* 78 (3): 395-401

[22] Jaafar, M., and T. Ramayah, 2006. Work satisfaction and work performance: How project managers in Malaysia perceive it? *Aca. of World Bus. Markg. and Manage. Devt. Conf. Proc.* 2 (113).

[23] Jeromy, C., 2001. Turnover of direct support professionals. *Delaware.* (1):2-3.

[24] Lin, A. L. S., 2008. Securing financial resources for small and medium contracting firms in Malaysia, M Sc Thesis. Universiti Sains Malaysia.

[25] Lee, T., and S. Maurer, 1997. The retention of knowledge workers with the unfolding model of voluntary turnover. *Hum. Res. Manage. Rev.* 7(3): 247-275.

[26] Lise, M. S., and A.T. Judge, 2004. Employee attitudes and job satisfaction. *Hum. Res. Manage.* Winter 2004, 43(4): 395-407.

[27] Mueller, P. J., 1990. Economic, psychological, and sociological determinants of voluntary turnover. *The J. of Beh. Econ.* (19): 321-335.

[28] Musa, Y. W., and M.D. Danjuma, 2007. Small and medium scale enterprises: A veritable tool for sustainable job creation in Nigeria. *J. of Bus. and Pub. Pol.* 1(4):1-24.

[29] Nicholas, C., and H.C. Theodore, 2010. The effects of age on the job satisfaction of construction workers. *J. of Eng. Des. and Technol.* 8(1).

[30] Ofori, G., 2009. Small and medium sized construction enterprise development. *Const. for Dev. (ISIZA).* 1st quarter.

[31] Okpara, J. O., Squillace, M., and A.E. Erondu, 2005. Gender differences and job satisfaction: A study of university teachers in the United States. *Women Manage. Rev.* 20(3): 177-190.

[32] Oshagbemi, T., 1999. Overall job satisfaction: How good are single versus multiple-item measures? *J. of Manage. Psych.* 14 (5): 338-403.

[33] Ongori, H., 2007. A review of the literature on employee turnover. *African Journal of Business Management.* 049-054.issn 1993-8233.

[34] Price, J., 1977. *The study of turnover.* Ames, IA; Iowa state university press.

[35] Pak, O. G., 2007. The effect of organizational learning on organizational commitment, job satisfaction and work performance. Ph.D. Thesis. University Putra Malaysia.

[36] Rashid, U., and S. Rashid, 2011. The effect of job enrichment on job satisfaction: A case of faculty members. *Interd. J. of Contemp. Res. in Bus.* 3 (4): 106-117.

[37] Rashmi, S., and J. Gole, 2008. Effect of job stress and job satisfaction on performance: An empirical study, *AIMS Int. J. of Manage.* 2(3).

[38] Sims, R. R., 2002. *Managing organisational behaviour.* Westport, Quorum Books.

[39] Steers, R. M., 1977. Antecedents and outcomes of organizational commitment, *Adm. Sc. Quart.* (22): 46-56.

[40] Sheehan, E. P., 1988. The effects of employee turnover on those who stay: Equity theory approach. *DAL,* 49(10B):4590. University of California, Santa Cruz.

[41] Staw, B. M., 1995. The Consequences of Turnover. *J. of Occup. Beh.* (1): 253-273.

[42] SSE., 2008. The Sudanese Society of Engineers. *Sudanese J. of Const.* Version Seventy-fourth.

[43] Yang, P., and Y. Yu, 2011. The barriers to small and medium enterprises implementation of lean production and countermeasures based on SMS in Wenzhou. *Int. J. of Innov. Manage. and Technol.* 1 (2): 220-225.