# CONSTRUCTION EMPLOYEES' PERSPECTIVES ON WORKFORCE MOTIVATIONAL DRIVERS IN AKWA IBOM STATE OF NIGERIA

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#### **ABSTRACT**

**Purpose:** The global demand for increase in construction activity necessitates the improvement of project performance. In the construction industry, motivation is seen as an intermediate variable between principle project activity and project performance. This paper assesses the positive motivational drivers that can propel construction employees' behaviours towards achieving project success.

**Methodology:** The literature scan between 2000 and 2012 reveals thirty-three employee motivational drivers; these were selected for the research. The study adopts qualitative and quantitative methods to evaluate current practices and identifies the most significant motivating drivers in the Akwa Ibom State of Nigeria.

**Findings:** The results show that the majority of respondents agreed on the use of rewards for achieving optimal outputs. The professional and personal developments of employees have not been promoted efficiently by their employers. Prospects of promotion, participation in decision making and respect for people are ranked as the most significant employee motivational drivers.

Value of research: The findings create an insight for the construction practitioners to gain better understanding of the key areas to focus on in order to achieve optimal outputs

#### **KEYWORDS**

Workforce motivational driver, project performance, construction employees and optimal outputs.

#### INTRODUCTION

The construction industry employs a high percentage of the workforce, with the highest record of job losses compared to other industrial sectors [6, 24]. Over the past decades, the workforce has experienced a shift from blue collar (routine work) to white collar (knowledge work). This involves the continuous process of creation of new insights and beliefs that define problems; develop and apply new knowledge to solve problems; and then further develop new knowledge through the action of problem solving [19]. Today's highly competitive and rapidly evolving work environment demands that businesses be able to respond to changes in market conditions, legislation, technology or public expectations [4]. In recent years, the construction industry has experienced increasing interest in innovation, both among practitioners and academics [22]. The innovation consists of new methods, materials and technologies in construction project implementation. Despite the improvements, the statistic reveals that 65 percent of executed projects do not achieve their objectives [9].

The non-compliance with project objectives has resulted in poor project performance. Previous studies have shown that even talented employees with excellent technical and project manage-

ment skills can perform poorly if they are not motivated effectively [8, 33, 42]. Motivation is an act of manipulation that can carry positive and negative implications [28]. From the logical and rational approach, it is presumed that employees are motivated to respond to inducements of project managers, but this is not always the case. In the modern workforce the use of incentives and rewards to motivate employees has become increasingly ineffective as a motivation to achieve performance. For example, the use of compensation as a motivational tool can get to a point where it is predictable, and it then becomes an entitlement, not a motivator [18]. It is therefore important to adopt the appropriate reward and recognition that can motivate an individual positively towards achieving the desired project outcomes. This paper is aimed at assessing the positive motivational drivers that will influence construction employees' behaviours to achieve project success. In order to achieve this, the following objectives are considered: (a) identification of the motivational drivers that can propel employees' behaviours to achieve the project objectives, and (b) evaluation of the current practices in terms of employee motivation and work productivity in Akwa Ibom State.

#### Motivation of the construction workforce

Motivation is defined as an internal driver that activates and directs behaviours [26]. Motivation of employees is a tricky exercise that requires a clear understanding of concepts, principles and myths about motivation in order to effectively utilise it [1, 28]. Employees, being people, are different, act in different ways and are motivated by different things. Motivation is focused on redirecting the employee's energies toward optimising job related behaviours [16]. This requires proper understanding of the employee's strengths and weaknesses so as to find out what will be needed to get specific employees to perform and also on how to capitalise on the ways these employees learn, in order to motivate them effectively [3]. In the construction industry, motivation is considered as an intermediate variable between principal project activities and project performance [17, 23, 29]. The nature of the construction industry relies heavily on its workforce to remain competitive and profitable [10]. Throughout history, both practitioners and academics have sought to find the most effective ways of motivating the construction workforce.

Seiler et al. [27] classify motivation theories into two major types, namely: (a) content theories, and (b) process theories. The content theories focus on individual needs, and explain why it is important to consider the individual needs of employees with regard to work motivation, while process theories define motivation in terms of a rational cognitive process, and focus on behaviour as a result of a conscious decision making process. Parkin et al. [21] argue that the behaviour and psychology of employees may not always conform to motivation theories. The study conducted by Ogunlana and Chang [20] emphasises that the selection of motivators differs in the context of culture and working environment. There are several misconceptions about what drives employee motivation [18]. It is important to understand that a

combination of factors motivates employees, not just one type of extrinsic or intrinsic reward [16].

### Review of employee motivational drivers in the construction industry

Many researchers have studied motivational tools in different contexts. Lifson and Shaifer [15] argue that knowing the importance of the factors influencing the decision making process would allow key and major decisions to be reviewed and discussed regularly. This paper reviews the selected studies published across the globe from 2000 to 2012. In the study conducted by Hemanta and Xia-Hua [10], a total number of 13 sub-criteria and 25 project attributes were identified in relation to workers' motivation and work productivity in Australia. Slowikowski [32] lists ten demotivators that affect employee performance on construction sites in the study on motivating workers. The research efforts in Turkey by Parkin et al. [21] identify 10 motivating factors and eight de-motivating factors influencing Turkish construction workers. The study emphasised the use of internal and cultural forces to motivate construction workers. Skitmore [31] examines the de-motivating factors influencing foremen, plant operators, carpenters and steel fixers involved in civil engineering projects in China, while the paper authored by Uwakweh [39] observes the level of motivation among construction apprentices throughout the mid-western cities of America. Huang [12] investigates the job satisfaction of employees of subcontractors working in Taiwan.

The study on whether the occupational groups are motivated by differing motivating factors conducted by Holmes [11] reveals that the choice of the motivational factors is influenced by the characteristics of an individual occupational group in New Zealand. Yisa et al. [43], in their study on the Iranian Construction Industry, report that the international political situation and economic sanctions have produced market instability, which has a direct influence on the factors affecting motivation of construction site managers. Other researchers have also identified motivational drivers as commitment [37], management theories [41], quality of life [30], and consumerism and culture [38]. A review of literature has revealed 33 common drivers that different researchers have argued could influence workers' productivity on construction sites.

#### RESEARCH METHODOLOGY

#### Questionnaire design

The research problem addressed is that contractors are faced with the responsibility of achieving best performance in project delivery, but how best to motivate the construction workforce towards best performance has remained a challenge in the industry. The exploratory nature of this study requires a combination of both quantitative and qualitative methods of data collection. For the quantitative approach, surveys through questionnaires were found to be effective because of the relative ease of obtaining standard data appropriate for achieving the objectives of this study. A questionnaire survey was used to get information from respondents in order to assess the employees' perceptions of motivational drivers and the impact of the current practices on employee motivation and work productivity. Based on the strengths and weaknesses identified in the literature scan, a draft questionnaire was prepared and shown to professional experts and academics in the field. Amendments were made on the drafted questionnaire based on the suggestions of the reviewers. The questionnaire required the respondents to rank their answers on a Likert-scale of 1 to 5. According to Farrell [7], the use of a qualitative method for data collection may be problematic to achieve a result, but the data captured are rich. Personal interviews were conducted with some respondents to clarify their answers.

#### Characteristics of respondents

The study population comprises construction firms that are involved in building and civil engineering works in Akwa Ibom State of Nigeria. Akwa Ibom is an oil rich state with the largest

allocation of oil revenue. For the past five years, the state has experienced the largest infrastructural development in Nigeria, thus has also increased the demand for best performance. Kothari [14] stipulates that survey protocol of random sampling procedures allows a relatively small number of people to represent a much larger population. The study targeted a total number of 10 contractors registered with Ministry of Works and Housing, Akwa Ibom State under the grades of C to D, who are actively involved in on-going projects. A total number of 80 questionnaires were sent to the construction professionals working with the selected contractors. Face to face delivery is preferred to promote clarification of arising queries and raise response rate. For varied reasons, only 63 construction professionals participated in the research, with a response rate of 79%. The survey was carried out from September 2012 to mid-January 2013.

#### DATA ANALYSIS AND DISCUSSION

This section presents the analysis and discussion of the findings obtained from the copies of the administered questionnaire. Table 1 reveals the demographic data of respondents. This shows that respondents are well educated and have ample experience in the construction industry; therefore their responses are of great value to this research. Table 1 also discloses that a total of 48% of the respondents are involved in the residential construction sector, followed by 23% involved in industrial, 18% involved in commercial and 16% involved in infrastructure. The analysis further shows that respondents are involved in different construction sectors, thus their responses can be generalised for all sectors. The contract procedure reveals that 60% of the respondents have been involved in both partnering and non-partnering projects. A total of 67% of the respondents are engaged in projects with average contract sums of above N500million.

Table 1: The demographic data of respondents.

|  | Fre-<br>quency | Percent<br>% | Cumulative percent |
|--|----------------|--------------|--------------------|
| Profession of respondents (N = 63)           |                |              |                    |
| At least certificates                        | 63             | 100          | 100                |
| in related fields<br>Unskilled workers       | 0              | 0            | 0                  |
| Construction industry sector                 |                |              |                    |
| Residential<br>Commercial                    | 25<br>12       | 40<br>19     | 40<br>59           |
| Industrial                                   | 15             | 24           | 83                 |
| Infrastructure                               | 11             | 17           | 100                |
| Working experiences                          | 20             | 4.0          | 4.6                |
| 1 to 4years<br>5 to 7years                   | 29<br>19       | 46<br>29     | 46<br>75           |
| 8 to 10years<br>Above 11years                | 10<br>7        | 15<br>10     | 90<br>100          |
|  | ,              | 10           | 100                |
| Contract procedure Partnering                | 12             | 19           | 19                 |
| Non-partnering Both                          | 13<br>38       | 21<br>60     | 40<br>100          |
|  | 36             |              | 100                |
| Average contract sum in last 12 months       |                |              |                    |
| N 1million to N100m<br>N 101million to N500m | 0<br>21        | 0<br>33      | 0<br>33            |
| Above N500m                                  | 42             | 67           | 100                |
| Average annual Income                        |                |              |                    |
| Less than N2.5million<br>N2.6m to N5million  | 51<br>0        | 81<br>0      | 81<br>81           |
| Above N5 million                             | 12             | 19           | 100                |

#### The use of rewards to achieve optimal outputs

This is to assess the respondents' opinions on how to achieve optimal outputs in projects. Figure 1 shows that 43.8% of respondents agreed it is important to use rewards and 43.7% agreed it is very important while none of the respondents disagreed. It reveals all the respondents agreed at different levels that the use of rewards can achieve optimal outputs.

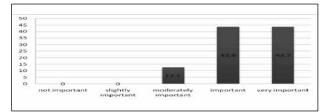


Figure 1: The use of rewards to achieve optimal outputs during project implementation.

#### Employee motivation subject to incentive programmes

The aim is to evaluate the respondents' responses on incentive programmes. 55.6% and 33.3% of the respondents considered incentive as 'highly motivating' and 'motivating' respectively while only 11.1% considered it 'moderately motivating'. Figure 2 discloses that incentive programmes can be used to motivate employees in project delivery.

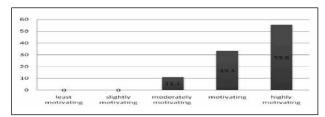


Figure 2: The use of incentive programmes to motive employees' inputs.

#### Organisations encourage employees towards improving at professional and personal levels

This section focuses on assessing the contributions of employers towards their employees' professional and personal developments. Figure 3 shows the highest response rate of 41.2% for 'more likely', followed by 23.5% for 'maybe', then 17.6% for 'most likely' and 'likely'. The responses are not sequential; this implies that the motivation of the respondents towards professional and personal developments may not have received adequate attention from employers.

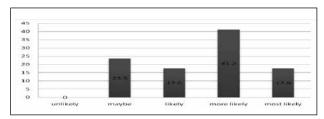


Figure 3: The organisations' efforts towards employees' improvement at professional and personal levels.

# Employees' efforts and contributions to the organisation

This seeks to evaluate how the efforts and contributions of employees are being valued by employers. Figure 4 displays that 57.9% of the respondents believed that efforts and contributions are 'moderately recognised', 31.6% believed they are 'recognised', while 8.5% believed they are 'highly recognised'. This reveals that majority of respondents' efforts and contributions are moderately recognised which implies there is a need for improvement by employers.

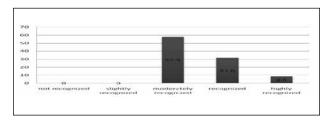


Figure 4: Levels of recognition of the employees' efforts and contributions by their organisations.

#### Long-term prospect in the organisation

This examines the employees' perspectives on their current organisations in terms of job security, promotion, training and career advancement. Figure 5 presents the highest response rate of 33.3% 'moderately agreed' that they have long-time prospects, followed by 26.6% 'agreed', 20% 'slightly agreed', 13.3% 'are not really sure' and 6.8% 'strongly agreed'. According to SCS [34], job losses in construction pose a real challenge for the economy in terms of the retraining and up-skilling of unemployed construction workers. Lack of long-time prospects does not only affect construction employees' output but it also has a negative impact on the construction economy.

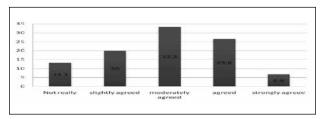


Figure 5: The long-term prospect in the organisation.

#### Level of performance on projects

The aim of this section is to evaluate the level of performance on previously completed projects. A benchmark of 3, that is (1+2+3+4+5/2=3) was used to evaluate the project objectives, which implies that all scores above 3 are significant while those below 3 are considered insignificant. Table 2 shows the ranking of level of performance using critical project objectives.

Table 2: Level of performance.

| <b>Critical Project Objectives</b> | Mean Index | Rank |  |
|------------------------------------|------------|------|--|
| Cost                               | 4.06       | 2    |  |
| Time                               | 3.70       | 3    |  |
| Quality                            | 4.35       | 1    |  |

Using the benchmark score of 3.0, Table 2 shows the project objectives are significant, with the highest mean score of 4.35 for 'project quality' followed by 4.06 for 'cost' and 3.70 for 'time'.

## Construction employees' perspectives on workforce motivational drivers

This section is to seek the preferences of employees on what motivates them on a construction site. Evaluation of data is calculated using the formula;

$$TWV = \sum_{i=1}^{5} PiVi$$
 Equation 1

Where TWV is the total weight value, Pi is the number of respondents rating the motivational driver i and Vi is the weight assigned to motivational driver i. The employee motivational driver index (EMDI) for each motivational driver is derived by dividing TWV by the number of respondents (n) and the mean of EMDI is also determined (see Equation 2).

$$EMDI = \sum_{i=1}^{5} PiVi/n$$
 Equation 2

The absolute deviation from the mean of each motivational driver, variance and standard deviation of the distribution are calculated to measure the scatter about the mean. The coefficient of skewness is computed to measure the distribution of the extreme value to indicate how it has affected the mean. The variance is computed using the formula;

Variance = 
$$\Sigma \left( \frac{\text{EMPI} - \mu}{N} \right) 2$$
 Equation 3  
= 11.67/33 = 0.35

Standard Deviation =  $\sqrt{\text{Variance}}$  = 0.59

The coefficient of skewness (Sk) = 3(mean - median)/ s = 3(-08)/0.59 = -0.4 approximately equal to 0. This implies that the data is normally distributed. From Table 3, the highest score for EMDI is 4.34 and lowest is 2.23 with a range of spread of 2.11.

'Prospect of promotion' is ranked as 1st; 'participation in decision making' is 2<sup>nd</sup> and 'respect for people' as 3<sup>rd</sup> while the least rank is 'responsibility'. Using the benchmark score of 3, a total number of twenty-six motivational drivers are significant, while seven motivational drivers are insignificant. The highest score for mean deviation is 0.88 and lowest is -1.31 with range of spread of 2.19. The analysis reveals 'prospect of promotion' as the highest motivating driver for project performance. According to Sparks [35], promotion in the construction industry is a high priority that requires tapping into all potential sources of labour supply to meet growing needs. The global demand for increase in construction activity necessitates training and retaining workers, as well as providing for long-term needs. Ranked second is 'participation in decision making'. This is in line with the study conducted by

Table 3: Employee motivation drivers indices

Rynes et al. [25] which discloses that 82% of HR professionals accepted that ensuring employees participate in decision making is more important for improving organisational performance than setting performance goals. Participation is a process that allows employees to exercise some influence over their work and the conditions under which they work [36]. Employees' participation in decision making has generally been opposed in management circles, but studies reveal that employees' participation relates directly or indirectly to increasing the efficiency of an organisation [2]. Ranked third is 'respect for people'. This has been misjudged by those employers who have malicious intentions to exploit employees and the clients are aware of this, but nevertheless choose to ignore it [5]. IWGRP [13] reports that firms who fail to improve their attitude and performance towards respecting people will fail to recruit and retain the best talent and professional partners.

#### CONCLUSION

The research study assesses the positive motivational drivers that can influence construction employees to achieve project success in Akwa Ibom State of Nigeria. The specific objectives are: a) to identify the motivational drivers that can propel employees' behaviours to achieve the project objectives and b) to evaluate current practices in terms of employee motivation and work productivity. A total number of thirty-three employee motivational drivers were identified through literature scan. Using the empirical data obtained from the respondents, issues relating to the current practices and motivating drivers in the study area were analysed. The findings show that the majority of respondents agreed that the use of rewards can achieve optimal outputs. There is a need to improve on professional and personal developments of construction employees in order to motivate them toward best performance. Using the benchmark score, the rating of performance of the critical project objectives discloses all are significant with mean indices of above 3.0. The long-term prospect in organisation is below average. This implies both employees' outputs and construction economy are affected. The efforts and contributions of the construction employees are not adequately recognised.

| Motivational drivers                        | EMDI | Rank             | Mean deviation | (EMDI - μ) <sup>2</sup> |
|---|------|------------------|----------------|-------------------------|
| Income increment                            | 4.2  | 4 <sup>th</sup>  | 0.66           | 0.44                    |
| Flexibility of working hours                | 2.72 | 29 <sup>th</sup> | -0.82          | 0.67                    |
| Benefits                                    | 3.21 | 21 <sup>st</sup> | -0.33          | 0.11                    |
| Achievement                                 | 2.85 | 28 <sup>th</sup> | -0.69          | 0.48                    |
| Responsibility                              | 2.23 | 32 <sup>nd</sup> | -1.31          | 1.72                    |
| Tuition reimbursement                       | 3.17 | 23 <sup>rd</sup> | -0.37          | 0.14                    |
| Bonus superannuation payments               | 3.98 | 10 <sup>th</sup> | 0.44           | 0.19                    |
| Fairness of pay/ salary                     | 3.62 | 17 <sup>th</sup> | 0.08           | 0.01                    |
| Recognition, credit and acclaim             | 2.39 | 31 <sup>st</sup> | -1.15          | 1.32                    |
| Prospect for promotion                      | 4.34 | 1 <sup>st</sup>  | 0.8            | 0.64                    |
| Company socials/ parties/ celebrations      | 2.95 | 27 <sup>th</sup> | -0.6           | 0.36                    |
| Work itself                                 | 3.12 | 24 <sup>th</sup> | -0.42          | 0.18                    |
| Advancement/Completion of challenging tasks | 3.02 | 25 <sup>th</sup> | -0.52          | 0.27                    |
| Co-worker relationship                      | 3.48 | 19 <sup>th</sup> | -0.06          | 0                       |
| Good supervision                            | 3.19 | 22 <sup>nd</sup> | -0.35          | 0.12                    |
| Company policy and administration           | 2.45 | 30 <sup>th</sup> | -1.09          | 1.19                    |
| Working conditions                          | 3.89 | 14 <sup>th</sup> | 0.35           | 0.12                    |
| Personal life                               | 3.56 | 18 <sup>th</sup> | 0.04           | 0                       |
| Job security                                | 4.12 | 7 <sup>th</sup>  | 0.58           | 0.34                    |
| Job status                                  | 3.77 | 16 <sup>th</sup> | 0.23           | 0.05                    |
| Timely payments                             | 3.97 | 11 <sup>th</sup> | 0.43           | 0.18                    |
| Participation in decision making            | 4.33 | 2 <sup>nd</sup>  | 0.79           | 0.62                    |
| Physiological and safety needs              | 3.94 | 13 <sup>th</sup> | 0.4            | 0.16                    |
| Working facilities                          | 2.98 | 26 <sup>th</sup> | -0.56          | 0.31                    |
| Company's prestige                          | 3.45 | 20 <sup>th</sup> | -0.09          | 0.01                    |
| Overtime allowance                          | 4.1  | 8 <sup>th</sup>  | 0.54           | 0.31                    |
| Training of staff                           | 4.13 | 6 <sup>th</sup>  | 0.59           | 0.35                    |
| Respect for people                          | 4.25 | 3 <sup>rd</sup>  | 0.71           | 0.5                     |
| Growth                                      | 3.96 | 12 <sup>th</sup> | 0.42           | 0.18                    |
| Consumerism                                 | 4.01 | 9 <sup>th</sup>  | 0.47           | 0.22                    |
| Gaining proficiency                         | 4.14 | 5 <sup>th</sup>  | 0.6            | 0.36                    |
| Management theories                         | 3.56 | 18 <sup>th</sup> | 0.02           | 0                       |
| Creativity                                  | 3.88 | 15 <sup>th</sup> | 0.34           | 0.12                    |

Analyses of employees' motivation indices reveal 'prospect of promotion'; 'participation in decision making'; and 'respect for people' as the most significant motivating drivers. The findings will enable practitioners to gain better understanding of the key areas for improvement in order to achieve optimal outputs. The study may be limited in the sense that data used is from one locality, but the findings are useful and can form a basis for further research.

#### **REFERENCES**

- [1] Atchison, T.A. (2003) "Exposing the Myths of Employee Satisfaction", Healthcare Executives, 17(3), pp. 20.
- [2] Ayaji, M. O and Owoeye, C. O. (2005) "Workers' Participation in Decision Making in the Nigerian Construction Industry", Journal of Land use and Development Studies, 1(1), pp. 1 -10.
- [3] Brickingham, M. (2005) "What great managers do?" Harvard Business Review, 3(3), p. 70 –79.
- [4] Curtis, T. (2004) "Standards-based knowledge environment, Environments for oil and gas industry", PPPM Association, available at http://ppdm.org, retrieved on 25th June 2011.
- [5] Dainty, A., Green, S. and Bagihole, B. (2007) People and Culture in Construction: A Reader, New York: Taylor and Francis.
- [6] ETA/ Business Relations Group Report (2004) America's Construction Industry: Indentifying and addressing workforce challenges, available at http://www.doleta.gov, retrieved on 6<sup>th</sup> February 2011.
- [7] Farrell, P. (2011) Writing a Built Environment Dissertation: Practical Guidance and Examples, First Edition, UK: Blackwell Publishing.
- [8] Germann, M. (2004) "Influence of project managers on the motivational factors of a project team", Paper Presented at the 13<sup>th</sup> International Conference on Management of Technology IAMOT, Apirl, Washington, DC.
- [9] Hass, K. (2007) "May the Blending of Traditional and Agile Project Management", PM World Today, vol. IX, (V), available at http://www.pmforum.org/library/tips/2007/PDFs/Hass-5-07.pdf, retrieved on June 18, 2012.
- [10] Hemanta D. and Xia-Hua, J. (2008) "Modeling multi-criteria decision analysis for benchmarking management practices in project management", CIB W78 2008 international conference on Information Technology in construction, Santiago, Chile.
- [11] Holmes, B. (2010) "Employee motivation factors within a large New Zealand Construction Company", B.Sc. project work, University of Technology, New Zealand.
- [12] Huang, Y. and Lu, K. (2008) "Job satisfaction of construction workers of subcontractors", Paper presented at the bai-conference construction engineering, available at http://bai-conference.org/ files/BAI2010%20Proceeding/Papers/7.OB&HRM/7092.pdf, retrieved on November 4th, 2012.
- [13] Innovation's Working Group on Respect for people (IWGRP). (2000) "A commitment to people 'Our biggest Asset", available at www. constructexcellence.org.uk, retrieved on February 2nd, 2013.
- [14] Kothari, C. (2003) Research Methodology, Methods and Techniques, Second Edition, New Delhi: New Age Publications.
- [15] Lifson, M. W. and Shaifer, E. F. (1982) Decision and Risk Analysis for Construction Management, New York: Wiley.
- [16] Manion, J. (2005) From management to leadership, San Francisco: Jossey-Bass.
- [17] McConnell, S. (1996) Rapid Development: Taming Wild Software Schedules, Redmond, WA: Microsoft Press.
- [18] Morse, G. (2003) Why we misread motives, Harvard Business Review, 81(1), pp. 18.
- [19] Nonaka, I., Toyama, R and Konno, N. (2000) "SECI, Ba and Leadership, A unified model of dynamic knowledge creation", Long Range Planning, 33(1), pp. 5 -34.
- [20] Ogunlana, S. O. and Chang, W. P. (1998) "Worker motivation on selected construction sites in Bangkok, Thailand", Engineering Construction and Architectural Management, 5(1), p. 68-81.
- [21] Parkin, A. B., Tutesigensi, A. and Buyukalp, A. I. (2010) Motivation amongst construction workers in Turkey, In Dainty, ARJ (ed), Proceeding 25<sup>th</sup> Annual ARCOM Conference, 7 -9 September, Reading.

- [22] Reichstein, T., Salter, A. and Gann, D. (2005) Last among equals: comparison of innovation on construction, services and manufacturing in UK, Construction Management and Economics, 23(6), pp. 631 -644.
- [23] Rose, T. and Manley, K. (2011) "Motivation towards financial incentive goals on construction projects", Journal of Business Research, 64(7), pp. 765-773.
- [24] Rosen, S. M., Simon, J., Macleod, W., Thea, D. M. and Vincent, J. R. (2001) Investing in the Epidemic: the impact of HIV/AIDS on Businesses in Southern African, Mimeo.
- [25] Rynes, S. L., Colbert, A. E. and Brown, K. G. (2002) "HR Professionals Beliefs about effective Human Resource Practices: Correspondence between research and practice", Human Resource Management, 41, pp. 149 -174.
- [26] Sansone, C. and Harackiewicz, J. (2000) Intrinsic and Extrinsic Motivation—the Search for optimal Motivation and Performance, Academic Press, San Diego, CA.
- [27] Seiler, S., Lent, B., Pinkowska, M. and Pinazza, M. (2012) "An integrated model of factors influencing project managers' motivation – findings from a Swiss Survey", International Journal of Project Management, 30, pp. 60–72.
- [28] Shanks, N.H. (2011) Management and Motivation, Jones and Bartlelt Publishers, available at http://www.jbleaning.com on 20<sup>th</sup> October. 2012.
- [29] Sharp, H., Hall, T., Baddoo, N. et al (2007) Exploring motivational differences between software developers and project managers, Poster Session presented at 6th Joint Meeting on European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, September, Dubrovnik.
- [30] Sirgy, M. J. (1986) "A quality-of-life theory derived from Maslow's developmental perspective: 'quality' is related to progressive satisfaction of a hierarchy of needs, lower order and higher", American Journal of Economics and Sociology, 45(3) 329-342.
- [31] Skitmore, M. (2004) "Demotivating factors influencing the productivity of civil engineering projects", International journal of project Management, 22(2), 139-146.
- [32] Slowikowski, N. (2012) "Motivating Workers, Supervision for Managers, Superintendents and Foremen", available at http:// www.awci.org, retrieved on 30<sup>th</sup> October, 2012.
- [33] Snell, S. (1999) Motivate Your Staff—Self Study Workbook, 2<sup>nd</sup> edition, London: Kogan Page Limited.
- [34] Society of Chartered Surveyor (2012) The Irish Construction Industry in 2012, available at www.scsi.ie/constr 2012, retrieved on February, 2013.
- [35] Sparks, R. (2012) "Priority on recruiting, training and managing trade mobility for resource projects", Construction in Canada enters 2<sup>nd</sup> decade of strong growth, available at www.csc-ca.org, retrieved on February 1<sup>st</sup>, 2012.
- [36] Strauss, G. (2006) "Workers Participation Some under-considered issues", Industrial Relations, 45 (4), pp. 778 803.
- [37] Stum, D. L. (2001) "Maslow revisited: building the employee commitment pyramid", Strategy and Leadership, 29(4), pp. 4-9.
- [38] Trigg, A. B. (2004) "Deriving the Engel Curve: Pierre Bourdieu and the social critique of Maslow's hierarchy of needs", Review of Social Economy, 62(3), pp. 393-406.
- [39] Uwakweh, B. O. (2006) "Motivational climate of construction apprentice", Journal of construction engineering & management, 132(5), pp. 525-532.
- [40] Walker, F. K. (1997) "Workers' participation in Management: Problems practice and prospects", L. S. Bulletin, Geneva International Institute of Labour Studies, No. 12, pp. 6.
- [41] Whittington, J. L. and Evans, B. (2005) "General issues in management: the enduring impact of great ideas", Problems and Perspectives in Management, 2, pp. 114-122.
- [42] Wiley, C. (1997) "What motivates employees according to over 40 years of motivation surveys?" International Journal of Manpower, 18 (3), pp. 263–280.
- [43] Yisa, S. B., Holt, G. D. and Zakeri, M. Factors affecting management motivation in the Iranian construction industry: a survey of site managers. In: Akintoye, A. (Ed.), 16th Annual ARCOM Conference, 6-8 September 2000, Glasgow Caledonian University. Association of Researchers in Construction Management, 2, pp. 465-472.