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ORGANIZATIONAL EFFECTIVENESS OF UGANDAN BUILDING FIRMS AS VIEWED BY CRAFTSMEN

Henry Alinaitwe¹, Jackson A. Mwakali², Bengt Hansson³

^{1,2}Department of Civil Engineering, Makerere University, P. O. Box 7062, Kampala, Uganda E-mail: ¹alinaitwe_h@tech.mak.ac.ug

³Division of Construction Management, Lund University, P. O. Box 118, 221 00, Lund, Sweden Received 18 Nov 2008; accepted 13 Mar 2009

Abstract. Construction industries, especially those in developing countries, face the problems of low productivity. It comes about partly due to organizational ineffectiveness. The major attributes of organizational effectiveness are identified from literature. Means to achieving greater organization effectiveness and higher productivity are identified under the major headings of cohesion and morale of workers, adaptability, information communication, and planning. Using a structured questionnaire survey on building craftsmen in Uganda, results suggest that most workers are not satisfied with the financial reward, level of status is not able to achieve personal goals. Workers are not satisfied with the level of training. The variables are weak points in organizational effectiveness. In addition, workers are not satisfied with the level of participation in decision-making. There is a need to dwell on these grey areas in order to improve the organizational effectiveness of building firms, especially in developing countries.

Keywords: organizational effectiveness, attributes, labour, productivity, Uganda.

1. Introduction

The construction sector represents one of the most dynamic and complex industrial developments the world over. In Uganda, construction is a comparatively large industry, as it has been contributing about 12% of Gross Domestic Product (UBOS 2005). The majority of construction workers in Uganda are employed by small firms (Alinaitwe 2008). It is a project-based sector within which individual projects are usually custom-built to client specifications. Fluctuations in the economic markets are reflected in considerable variations in the number, size and type of projects undertaken by construction organisations over time. Construction is undertaken by an amalgam of firms, which change from project to project. The firms involved in each project are independent companies, which are organisationally interdependent in terms of the human resources. The finished products largely are assembled at the point of use, subject to environmental factors in different geographical areas. These industry characteristics present a challenging context for effective management of human resources.

The concept of human resource management (HRM) has received a focussed attention in many industries. The recognition that people are not simply one of the factors of production, along with money and machinery, but the major source of competitive advantage is important. How organizations recruit, train, reward, motivate and discipline their employees is of central importance to business success (Edgar and Geare 2005). Firm's choice of specific practices, and the extent to which these are

integrated in a policy linked to business strategies, are especially important for competitiveness (NEDO 1987).

There is a major concern in the discrepancy between the rhetoric of HRM and the reality of practice (Sisson and Storey 2000). The problem is that most of the HRM qualities are largely lacking and construction is still considered as a tough person's business. Most construction managers and supervisors consider a democratic leadership style as a weakness (Halepota 2005). Yet, many of the challenges faced by the construction industry arise by a need to maintain a skilled and competitive workforce (Rowings *et al.* 1996).

The objective of this research is to examine attributes that lead to a better organisational effectiveness in the context of the building industry in Uganda. The paper begins with an examination of the organisational theory and discusses the application of organisation effectiveness to the building construction industry. This is followed by a discussion on research methodology, later the results of the survey, discussions, conclusion and recommendations.

2. Background literature

The low rate of innovation in the industry means that it continues to rely mainly on intensifying work within a relatively stable technology for increasing productivity per head, and the costs of attempting to use this route to increase productivity have been significant (Winch 1998). The reliance on the market control of the labour process inherent in labour-only subcontracting or a self-employed basis means that it is extremely difficult to implement

either technological change or industrial engineering programmes in construction (Winch 1986). This implies that employers have chosen a very limited way of increasing productivity – work intensification – over more thorough going investments in improving work organisation through capital investment and rationalisation of the production process. Winch (1994) argues that flexibility has been favoured over increased productivity.

Perhaps the main reason that productivity growth has been poor is the low level of technological change in the industry. This has been long a problem and is related to the overall structure of the industry, and contractors' reluctance to invest in the fixed and human assets that would generate much increases (Winch 1998).

Management and organisation are intrinsically interlinked concepts. Management is the dynamic input that makes the organisation work. For industries more homogenous than the construction industry, the distinction between management and organisation is sufficient, but an essentially sharp focus on the organisation of the many diverse contributors to construction projects is necessary, if the successful management of projects is to be achieved (Miner 2002). Miner defined effective organizations as those that receive inputs, transform them into outputs, export them to environments, and monitor changes in the environments to take corrective actions to ensure their survival. Another perspective is that an effective organisation is the one that satisfies the demand of those constituencies in its environment from whom it requires support for its continued existence (Handa and Adas 1996). Organisational effectiveness can be looked at as the ability of an organisation to fulfil its mission through sound management, strong governance and a persistent rededication to achieving results.

There are various approaches for assessing the organisational effectiveness, but the criteria for organisational effectiveness using the competing values approach as proposed by Quinn and Rohrbaugh (1983) were chosen. The competing values approach represents the integration of most of the effectiveness criteria and it has already been validated by construction organisations (Maloney and Federle 1993). The approach has been discussed by other people, including Robbins (1990) and Maloney and Federle (1991), although they conclude that there is no one best criterion for evaluating effectiveness. The competing values approach organises, consolidates and integrates multiple criteria in the domains of the effectiveness into 3 sets of incompatible dimensions. These are flexibility versus control, internal versus external focus and means versus ends. The 3 sets are depicted in the 4 models in Fig. 1. The models are open systems, the human relations, the rational goal and the internal process. Each model has characteristics which differ from the other and which influence the level of effectiveness in the organisation differently. Organisational effectiveness is mainly influenced by the means. The study focused on identifying variables of means so that an inquiry is made on how they affect organisational effectiveness. As can be seen from Fig. 1, the means to organisational effectiveness are taken as cohesion/morale, information communication, planning and goal setting, and adaptability. Handa and Adas (1996) propose some of the variables influencing the level of organisational effectiveness in the construction firms as: organisational attitude towards change, multi project handling ability, level of planning by management, strength of organisational culture and level of workers' participation in decision-making.

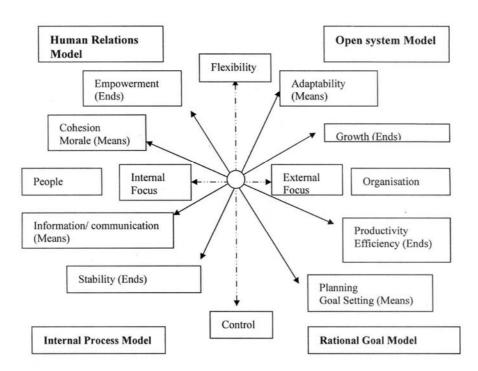


Fig. 1. Competing values configurations and criteria of organisational effectiveness (Adopted from Quinn and Rohrbaugh (1983)

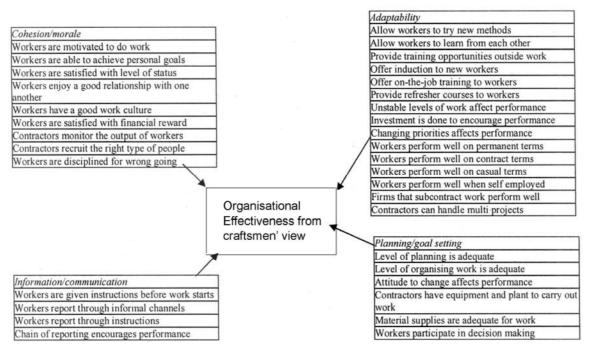


Fig. 2. Attributes identified for measuring organisational effectiveness among building workers

The means of cohesion/morale; information communication/planning and goal setting and adaptability can make organisations more effective. Employee morale is a fundamental component of business operations - high morale coincides with job satisfaction, high work effort, creativity and initiative, a sense of pride in one's work, a commitment to one's organization, and the desire to put the achievement of group (common) goals ahead of personal goals, thereby enhancing an organization's performance (Beer and Katz 2003). Adaptability has been operationalised most often in terms of learning or performance in a task that is complex, novel or ill defined (Mumford et al. 1993). Adaptability of an individual largely depends on the training one has received. Communication is the art of expressing and exchanging ideas in speech or writing (Shockley-Zalabak 2001). Communication to workers on construction sites is mainly carried out through instructions and meetings that may be through formal channels or informal channels, written or verbal (Dainty et al. 2005). It involves interaction between specialists, moving information between those with information and those, who find information useful (Egbu and Robinson 2005). Planning is the process of setting goals, designing strategies, outlining tasks and schedules to accomplish the goals (Cooke and Williams 2005). The analysis of organisational effectiveness using the competing values was aided by identifying 34 attributes from the literature. These attributes are grouped under the four means summarised in Fig. 2.

3. Methods

3.1. Approach

The most common approach employed in studies, assessing the relationship between HRM practice and employee work-related attitudes, is the survey (Cully *et al.* 2000).

Surveys through guided questionnaires were found appropriate because of the relative ease of obtaining standard data appropriate for achieving the objectives of this study. Listening to what employees have to say about HRM in practice, as its implemented has always been strong for organisations (Guest and Peccei 1994). The approach was adopted because of its effectiveness in getting accurate information from a workforce with a low level of education and its guaranteed response rate.

3.2. Questionnaire design

Attributes on how the workers perceive the effect of organisation effectiveness were identified through literature survey. A total of 34 factors were identified as indicated in Fig. 2. The attributes were structured into a questionnaire, which was administered as an interview to 168 workers. The survey was carried out in interview form by assistants in order to increase the understanding of questions to the construction workers. The participants were asked to rate the factors in the way in which they perceive the attributes to be relevant at their places of work. The guided questionnaire required the respondents to rank their answers on a Likert Scale with the rating of "1" representing strongly agree; "3" representing neutral/ unsure and "5" representing strongly disagree. Pilot studies were carried out to ensure the clarity and relevance of the questionnaire to the workers. The questionnaire was shown to two other researchers. Based on their feedback, amendments were made to the questionnaire and the second phase of the pilot study was conducted on 5 building workers, who were not going to participate in answering the final one. This pilot study was conducted to improve the questionnaire, in terms of wording statements and the overall content. The draft questionnaire was revised to include the suggestions made by these participants.

3.3. Sample selection

The survey gathered data from building craftsmen in the building industry in Uganda and from as broad a geographic area within Uganda as possible. For this purpose, it was determined that participants be drawn from building contractors who are registered with the contractors' association. The target population of contractors was 168, those that were registered with Uganda National Building Engineering Contractors' Civil Association (UNABCEC) and carry out building work. At the national level, one recognized way of categorizing registered building contractors is by the UNABCEC grade. The classification from A to E takes into account the financial strength, size and ability to carry out jobs. Those in class A are the biggest and undertake works of the biggest magnitude and include some multinational companies. There was no organisational difference between trades firms within the context of this study. For the purposes of this survey, project managers from each of the contractors were asked to provide one craftsman of a given trade chosen randomly to be guided in filling the questionnaire. Employee participation was voluntary, and the project managers endorsed the worker's participation. The survey targeted bricklayers, block layers concreters, painters and carpenters bearing in mind a minimum quota of 30 for each trade. Choosing one worker and using a quota system was adopted because of the largely transient nature of employment in the building sector and the fact that there was no population frame from which one could use other sampling strategies. A total of 168 questionnaires were filled out with the guidance of survey assistants. This was carried out over a period of 2 months starting in February 2007.

3.4. Survey response

The distribution in the various grades of the 168 contractors who were contacted and responded, is given in Table 1. All the registered building contractors had one worker that participated. A review of the responses from the surveys along the various grades of contractors and trades indicated no measurable differences in the respondents' answers to the questions. All the questionnaires were therefore combined for the analysis of this survey.

Table 1. Distribution of firms from which participants were drawn

Contractor UNABCEC grade	No. of participants	Percentage
A	35	20.8
В	38	22.6
C	34	20.2
D	30	17.9
E	31	18.5
Total	168	100.0

3.5. Characteristics of respondents

The distribution of the tradesmen involved is in Table 2. The mean age of the respondents was 26.7 years with a standard deviation of 5.3 years. They have a mean

working experience of 4.6 years. One can deduce that the workforce in the building industry in Uganda is generally comprised of young people. One would also expect that the more experienced or skilled the workers are, the more they can adopt to the construction environment. The distribution of respondents is 8.9% on permanent terms, 45.2% on short contract and 45.8% on casual basis. This suggests that the majority of the workers are employed on temporary terms either on short contract basis or on casual basis. Regarding training, 63.7% of the tradesmen who participated are trained on the job, the rest having trained through technical institutions. This information seems to suggest that the majority of building workers train on the job, just like was found out in some other countries (Olomolaiye 1990).

Table 2. Distribution of tradesmen who were involved in the survey

Trade	No. of participants	Percent
Bricklayer	30	17.9
Painter	31	18.5
Plasterer	30	17.9
Carpenter	30	17.9
Concreter	39	23.2
Multiple skilled	8	4.8
Total	168	100.0

4. Results and discussion

One sample t-test was used to test whether the various organisation effectiveness attributes identified earlier were significant as perceived by the workers. The one sample t-test was conducted using SPSS 10.0. A summary of the test results is shown in Table 3.

There are 2 ways of interpreting the results of the ttest. The first method was to compare the test significance level against the level of significance, which was set at 0.05(5%), following the conventional risk level. The alternative method was to compare the test t-statistic against the critical t value. The test value was set at 3 that corresponds to the neutral position of "unsure/uncertain" on the scale in the guided questionnaire. The value of μ_0 was fixed at 3 because by definition ratings below present agree and strongly agree. The null hypothesis H_o : $\mu = \mu_o$ against the alternative hypothesis H_A : $\mu \# \mu_0$ where μ is the population mean and μ_0 represents the critical rating below or above which the attribute was considered as significant. It can be seen from Table 3 that all the variables have significant level less than 0.05, apart from "workers are motivated to do work", "workers report through informal channels", and "workers perform well when self employed". The decision was to reject H_o for the 31 variables that have significance level less than 0.05. Alternatively, the critical value t for 167 degree of freedom (n-1) at $\alpha = 0.05$ was approximately 1.66 by interpolation. From Table 3, only "workers are motivated to do work", "workers report through informal channels", and "workers perform well when self-employed" fall in the rejection range of H_o. This seems to suggest that 31 variables have an impact on organisational effectiveness.

The mean ratings of the variables and their standard deviations are indicated in Table 3.

4.1. Cohesion and morale

Most of the variables identified under cohesion and morale were considered significant except "workers are motivated to do work", where the mean rating was 2.815 and test significance less than 0.05. Motivation is important in organisation effectiveness and research has been done in some other developing countries to identify motivators and demotivators (Kaming *et al.* 1998; Zakeri *et al.* 1996). However, the results seem to suggest that workers are generally unsure whether they are motivated to do work. The motivators and demotivators seem to even out. Results from the survey indicate that workers are generally not satisfied with their financial rewards (4.286), the level of status (3.869), and their ability to achieve personal goals (3.310). They allege that the pay is generally

poor and the workers are not able to meet their expenses. A number of workers commented, that they are not able to achieve most of their personal goals. Their level of status is also low. Many of the workers said they had failed to secure better employment elsewhere with better terms of work and in a good working environment and that is how they ended up in construction. The survey suggests that workers are satisfied with the level of relationship they have with each other (1.673); the work culture (1.905); monitoring of work by the employers (1.44); recruitment of the right people to do the jobs (2.030) and that workers, who are wrongdoers, are disciplined (1.304). The relationship the workers have is considered good partly because of the culture of the communities, where they are drawn. People respect each other and generally give due respect to supervisors and elders. Workers tend to work in groups for most of the tasks.

Table 3. One sample t-test for attributes of organizational effectiveness

				Test Value = 3		df = 167	
	Mean score	Std. devia- tion	t	Sig. (2-tailed)	Mean difference	95% confidence Interval of the difference	
						Lower	Upper
Cohesion/morale							
Workers are motivated to do work	2.815		-1.905	.059			6.727E-03
Workers are able to achieve personal goals	3.310		3.977	.000			.463
Workers are satisfied with level of status	3.869		11.193	.000			1.022
Workers enjoy a good relationship with one another	1.673		-21.495	.000			-1.205
Workers have a good work culture	1.905		-22.169	.000			998
Workers are satisfied with financial reward	4.286		20.889	.000			1.407
Contractors monitor the output of workers	1.440		-38.766	.000			-1.480
Contractors recruit the right type of people	2.030		-15.871	.000			850
Workers are disciplined for wrong going	1.304	.607	-36.228	.000	-1.696	-1.789	-1.604
Information/communication							
Workers are given instructions before work starts	1.286		-42.206	.000			-1.634
Workers report through informal channels	3.018	1.135	.204	.839	1.786E-02	155	.191
Workers report through instructions	1.548	.511	-36.835	.000	-1.452	-1.530	-1.375
Chain of reporting encourages performance	2.012	.869	-14.746	.000	988	-1.120	856
Adaptability							
Allow workers to try new methods	2.452	1.218	-5.829	.000	548	733	362
Allow workers to learn from each other	1.548	.597	-31.507	.000	-1.452	-1.543	-1.361
Provide training opportunities outside work	3.839	.981	11.091	.000	.839	.690	.989
Offer induction to new workers	3.565	1.053	6.958	.000	.565	.405	.726
Offer on-the-job training to workers	3.708	1.063	8.637	.000	.708	.546	.870
Provide refresher courses to workers	4.185	.900	17.058	.000	1.185	1.047	1.322
Unstable levels of work affect performance	1.911	.682	-20.704	.000	-1.089	-1.193	985
Investment is done to encourage performance	2.732	.906	-3.834	.000	268	406	130
Changing priorities affects performance	2.042	.836	-14.859	.000	958	-1.086	831
Workers perform well on permanent terms	2.351	1.332	-6.314	.000	649	852	446
Workers perform well on contract terms	3.327	1.135	3.740	.000	.327	.155	.500
Workers perform well on casual terms	3.780		11.005	.000			.920
Workers perform well when self-employed	3.137		1.371	.172		-6.027E-02	.334
Firms that subcontract work perform well	2.179		-12.424	.000			691
Contractors can handle multi projects	1.940		-11.981	.000			885
Planning/goal setting						-1	
Level of planning is adequate	2.363	.994	-8.309	.000	637	788	486
Level of organising work is adequate	1.768		-22.007	.000			-1.122
Attitude to change affects performance	2.000		-14.805	.000			867
Contractors have equipment and plant to carry out work	1.440		-35.094	.000			-1.472
Material supplies are adequate for work	1.524		-26.994	.000			-1.368
Workers participate in decision-making	3.911		10.155	.000	.911		1.088

4.2. Information and communication

The surveys indicate that workers are neutral about workers reporting through informal channels. The mean rating was 3.018 and the test significance was found insignificant at less than 0.05. The mode of reporting on construction sites is largely verbal and many supervisors talk directly to the junior workers without going through the headmen, for example. To the workers, that is not considered a problem. The social-technical systems theory proposes that organisation structure has to meet the social and psychological needs of various kinds, in addition to providing efficient channels of communication and authority. These needs as well as the level of uncertainty posed by the size, technology and environment of the firm, must be considered (Sisson and Storey 2000). Communication structures of organisations may be required which are not optimal for decision-making alone. The needs of the system, as a whole, must be optimised. People have the ability to construct informal organisation structures that circumvent the formal structure often to the benefit of performance. The results of the survey suggest that workers seem to be satisfied with the instructions they get before work starts (1.286), that workers respond to instructions given (1.548) and that the chain of reporting encourages performance (2.012). Considering that the levels of education of the workers are low, that might be affecting their ability to take in instructions and act of them appropriately, without making undue mistakes leading to rework.

4.3. Adaptability

As Mumford *et al.* (1993) put it, adaptability has been operationalised most often in terms of learning or performance a task. Adaptability for an individual largely depends on the training one has. However, it is seen from the results of the survey that provision of refresher courses (4.185), provision of training opportunities outside work (3.839), on-the-job training (3.708), and induction of newcomers (3.565) are seen as areas that are largely lacking. The variables mainly dwell on the ability of the contractors to provide training.

Most of the workers in Uganda are informally trained just like in other developing countries. Olomolaiye (1990) found out that in Ghana 80% of the workers acquired training informally as compared to 49% in Britain. It is worth noting that through liberalization and decentralisation polices, the Government of Uganda has mainly adopted an enabling approach, and currently the construction sector in Uganda is operating in an informal way especially as far as training is concerned (Mubuuke 2005). Most of the workers are either engaged on short contract basis or on casual basis. The ability of the industry to improve organisational efficiency, productivity and quality is compromised due to the ways in which labour is contracted which hinders training and innovation. Short contracts and casual engagement on piecework basis means that it is impossible to compensate workers and employers for the time taken to train workers (Ball 1983: 177). Ball argues that contractors engage workers on

short contract and casual basis because they would like to minimise working capital and maximise the flexibility of the workforce. The uncertainties generated by the contracting system encourage the casualisation of the labour market; where skilled workers are concerned, such casualisation is achieved most effectively through labour-only subcontracting. When labour is scarce, workers can bid up wages more easily under labour-only subcontracting; when work is scarce, employers can shed labour more easily (Winch 1998). Winch further argues that labour only subcontracting hampers attempts to improve quality from the existing practice levels; in particular, it prevents the implementation of total quality management on site. Results from the survey indicate that workers do not consider that engagement on contracts (3.327), casual terms (3.780) and self employment (3.137) increases performance. Most construction workers are hired on a project basis and made redundant on project completion or when tasks are over. As a result, the construction industry in Uganda is characterised by a pool of labour that works for a variety of contractors. Contractors employ workers from the local labour pool and when no longer required, will make workers redundant and force them to return to the pool. In the absence of manpower planning and development, the size of the local labour market pool fluctuates causing shortages and surpluses. Due to the transient nature of construction workforce, manpower planning and training can no longer be expected from contractors in order to have organisationally efficient firms. Reliable labour force data and proper investment plans are prerequisites to such accurate labour models and this is the problem in most countries (Jayewardene and Gunawardena 1996).

It is clear that workers generally acknowledge the opportunity they are given to learn new methods (2.452), and to learn from each other (1.548). They are also aware that unstable levels of activity (1.911), investment (2.732) and changing priorities (2.042) affect worker performance. Workers believe that firms that subcontract works perform well (2.179). The survey also indicates that workers believe that the contractors have the capacity to handle multi projects (1.940).

4.4. Planning/Goal setting

Most construction industries around the world are characterised by unstable levels of activity (Rosenfield and Warszawski 1993). This is compounded by inadequate investment plans and changing government priorities due to various sociological, economic and political constraints inherent in developing countries. These characteristics affect the organisational effectiveness. Results from this survey indicate that workers seem to be generally satisfied with the variables under planning and goal setting. These include the level of planning (2.363), the level of organisation (1.768), the attitude of change towards performance (2.000), the equipment and plant to carry out work (1.440) and material supplies for carrying out work (1.524). However, workers were not satisfied with the level of participation in decision-making (3.911). Low level of participation by workers in the construction industry is not unique to Uganda. Coffey and Langford (1998) concluded there are no discernable examples in UK, where it would be appear to be suited to its application. The construction industry may be not unique in terms of its organisational problems, but is perhaps unique in that the problems pervade all levels of construction activity and in many countries are firmly rooted in the historical development of the industry and its professions (Walker 1996). Organisation is not just about coordination, but also about learning, the generation of motivation and commitment. Firms that have adopted a structure appropriate to their production technology have performed better than those with inappropriate structures (Francis 2000).

5. Conclusions and recommendations

The objective of this research was to analyse the attributes of organisational effectiveness in the context of the building industry in Uganda. This paper presents 34 attributes of organisational effectiveness identified in literature. A questionnaire survey was conducted to investigate the significance of the 34 attributes. From the analysis, the most significant attribute of organisational effect is satisfaction with financial reward. The perception of the workers is that pay is generally poor and most of the workers are not able to achieve most of their personal goals. Although pay is subject to prevailing conditions, the need to pay workers living wages cannot be overemphasised.

The workers view is that there is a general lack of training in all forms: by refresher courses; provision of training opportunities outside work; on-the-job training; and induction of newcomers. Workers seem to be aware that engagement on short contract basis and casual terms does not encourage productivity and performance. The mode of engagement seems to discourage any training efforts. Considering that the labour force is transient and the majority of the skilled workers are informally trained, there is need to develop training methods and programs that suit them, wherever they may be. Structured methods of inducting new comers should be devised. The workers are not satisfied with the level of participation in planning and goal setting for the organisations. That may be partly explained by the transient nature of their employment. There is a need for contractors to have increased participation from the workers in order to have increased organisational effectiveness. Kazaz et al. (2008) posit that human resource has a strategic role for productivity increase of any organisation and this makes it superior in industrial competition.

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UGANDOS STATYBOS ĮMONIŲ ORGANIZACINIS EFEKTYVUMAS PAGAL MEISTRŲ POŽIŪRĮ

H. Alinaitwe, J. A. Mwakali, B. Hansson

Santrauka

Dauguma statybos rinkų, ypač besivystančių šalių, susiduria su prasto produktyvumo problema. Menkas produktyvumas iš dalies yra veikiamas organizacinio efektyvumo. Organizacinio efektyvumo pagrindiniai rodikliai yra aptarti literatūroje. Būdai didesniam organizaciniam efektyvumui ir produktyvumui pasiekti nustatomi naudojant kohezijos sąvoką ir darbuotojų moralę, gebėjimą prisitaikyti, informacijos pasikeitimą ir planavimą. Meistrų struktūrinės apklausos Ugandoje rezultatai parodė, kad dauguma darbuotojų nėra patenkinti atlygiu už darbą ir negali pasiekti savo asmeninių tikslų, taip pat ir mokymo lygiu. Šie dalykai yra silpnoji organizacijos vieta. Be to, darbuotojų netenkina dalyvavimo spendimų priėmimo lygis. Todėl reikia apsistoti ties šiais klausimais norint gerinti statybos įmonių organizacinį efektyvumą, ypač besivystančių šalių.

Reikšminiai žodžiai: organizacinis efektyvumas, rodikliai, darbo rinka, produktyvumas, Uganda.

Henry ALINAITWE has Licentiate and PhD degrees from Lund University (Sweden). He has a Master of Science degree in Construction Management from Loughborough University (UK) and a Masters degree in Structures from the University of Sydney (Australia). He has published several papers in international peer reviewed journals and conference proceedings. Member of the Uganda Institution of Professional Engineers.

Jackson A. MWAKALI is a Professor of Civil Engineering at Makerere University. His main areas of interest are structures, facilities maintenance, construction techniques and management. He is a practicing engineer and a member of the Uganda Institution of Professional Engineers. Currently, he is the chairman of the Engineer's Registration Board of Uganda. He has published several papers in academic journals, conference proceedings and authored textbooks. He has chaired a number of local and international conferences.

Bengt HANSSON is a Professor of Construction Management at Lund University (Sweden). He was formerly the head of Construction Management Division. His main areas of interest are industrialization, modularization, construction techniques, and performance management in the construction industry. He has published several papers in conferences, academic journals and authored textbooks.