

EFFECT OF MOTIVATION FACTORS ON LABOUR PRODUCTIVITY: STUDY OF CONSTRUCTION INDUSTRY IN JAFFNA DISTRICT

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INTRODUCTION

Productivity is one of the essential aspects for companies in the construction industry. Completion of construction projects on time mainly depends on labour productivity. Organizations seek the best way to achieve the objectives with the minor inputs and human resources to minimize costs. Demotivated individuals are likely to exert little or no effort in their tasks. Therefore, we need to understand the impact of current motivational methodologies on labour productivity in the construction industry in Jaffna. Every organization looks for productivity improvement among its employees, which would be geared toward organizational goal achievement. Investigating the effect of motivation on labour productivity in the construction industry is essential.

Motivation means how a person or a group of people are inspired to behave in a desired manner to receive some positive rewards or satisfy individuals' needs. To motivate individuals, a manager needs to meet their needs and to inspire them, he/she needs to do something beyond satisfying them. The concept of productivity is described as the optimal utilization of resources in producing goods or providing services to meet objectives. Productivity shows the relationship between inputs and outputs. Output and input differ from one industry to another. Also, the productivity definition varies when applied to different areas of the same industry (Borcherding & Liou, 1986). Labour productivity relates to the workforce in terms of labour cost to the outputs produced. Motivation is one of the key factors which drives the organization against its set tasks. Human motivation can be identified as a never-ending process due to the uncertainties of the dynamic environment.

Further, from a practical point of view, there should be a strong relationship between labour productivity and motivation for the overall success of any organization (Bandara & Weligodapola, 2012). Motivation is an art targeted at getting people to work willingly and the art of inducing them to behave in a particular manner to achieve a task (Aiyetan & Olotuah, 2006). According to Olanipekun et al. (2018), motivation is the competency that enhances the drive in workers to complete a given task. The productivity growth in the construction industry may have a considerable effect on economic development and stability. Therefore, even a slight improvement in construction site productivity would significantly benefit the national economy (Hosseini & Chileshe, 2013). Motivating employees will produce better results by fully utilizing the available human resources.

Productivity is the relationship between the output produced and the input provided to create this output (Prokopenko, 1987). Therefore, productivity can be defined as a ratio between output and input. Productivity indicates efficiently using available resources and converting them into noticeable results (Razak et al., 2014). Razak et al. (2014) explained that

improvement in labour productivity contributes a high deal to improving the project outcomes. The construction industry is said to be labour-intensive (Kisi et al., 2017), and construction workers are the primary contributors to the sector's productivity (Małachowski & Korytkowski, 2016). Hence an enhancement of the workers' productivity level can result in much cost savings for the construction projects (Nasir & Hadikusumo, 2019). Johari and Jha (2020) reported that, by increasing the motivation of workers, their productivity could be increased.

Past research (Kazaz et al., 2004; Khan & Ajmal, 2015) has linked various motivation factors to labour productivity. Wadhwa et al. (2011) reported that environmental, organizational, and behavioural factors positively impact productivity improvement among employees. Intrinsic motivation encourages workers to perform a task as the task is inherently enjoyable and pleasurable (Wen et al., 2018). At the same time, extrinsic motivation encourages individuals to actively engage in tasks to gain praise or awards or avoid punishment (Waugh, 2002). This creates a dilemma for the research community in identifying motivation factors in boosting labour productivity (Du et al., 2020). The present study considered four motivation factors: organizational, work environment, money, and facility. Researchers have reported that organizational factors can influence productivity (e.g., Razak et al., 2014; McForson, 2012; Kalburgi & Dinesh, 2010). Good working environment factors also motivate employees to higher productivity (Kalburgi & Dinesh, 2010; Maduka & Okafor, 2014; Enshassi et al., 2007).

Remuneration fulfils the physiological needs that are the essential requirement of people and gives esteem to society. McKenzie and Harris (1984) argue that money was the primary factor for construction workers. Olomolaiye and Ogunlana (1988) and Kazaz et al. (2008) also reported similar finding. Facility factor includes drinking water, proper sanitary facilities, site access, parking, and protective gear (Dozzi & Abourizk, 1993). According to Sims (2007), non-cash rewards such as flexible work schedules, performance recognition (e.g., an employee of the month), tailored goal incentives, etc., motivate employees for higher productivity. The literature review shows preliminary studies to understand the association between motivation and labour productivity in the Sri Lanka context. It is scarce to find studies on these phenomena in the construction industry. Previous studies have been conducted in various other contexts (for example, Kalburgi & Dinesh, 2010; McForson, 2012; Dozzi & Abourizk, 1993). In addition, the motivation factors considered by the previous researchers include organizational factors (Razak et al., 2014; McForson, 2012; Kalburgi & Dinesh, 2010), behavioural and environmental factors (Wadhwa, 2011), and various other factors (Kazaz, Manisali, & Ulubeyli, 2004; Khan & Ajmal, 2015). Hence, there is a gap in the literature regarding the association between various motivation factors and labour productivity in Sri Lanka.

There are a few shreds of evidence of studies conducted in different sectors in Sri Lanka. A study by Rathnayake et al. (2013) revealed that motivation factors such as work satisfaction, fringe benefits, responsibilities, and wage significantly affect tappers' labour productivity. Another study by Gunawardhana (2014) revealed that communication, love, belongingness, job security, and accommodations were among the critical factors of motivation influencing the productivity of construction workers. However, there is a research gap, especially in Jaffna District, and this study will fill the gap to some extent. The main objective of the present study

was to determine the impact of motivation on the productivity of workers in the construction industry in the Jaffna District. The study will answer the following research question.

How motivation impacts labour productivity in the construction industry in Jaffna District?

METHODOLOGY

The present study is a quantitative e, and a cross-sectional survey method was employed. The research participants for the study were selected from six construction firms functioning in the Jaffna region, and a total of 120 workers participated in the study. A convenient sampling method was used to select the samples. The questionnaire method was used to collect data, consisting of 15 questions to measure motivation and ten questions to measure labour productivity. Researchers have identified that there are four motivational factors: organizational factor, work environment factor, money factor, and facility factor (Khan & Ajmal, 2015). Considering these four factors of motivation, the following hypotheses were established in this study.

H1: Organizational factors of motivation positively impact labour productivity.

H2: Work environment factors of motivation positively impact labour productivity.

H3: Money factors of motivation positively impact labour productivity.

H4: Facility factors of motivation positively impact labour productivity.

RESULTS AND DISCUSSION

The data was analyzed using SPSS 21.0 to test the data's reliability and find the association between the variables. The reliability was examined using Cronbach's alpha. An alpha value of 0.7 or above is considered acceptable (Nannally, 1978). The results of the reliability analysis are shown in Table 1.

Table 1 Reliability of the constructs

Variables	Cronbach's Alpha	No. of Items
Organizational factor	0.895	4
Work environment factor	0.788	4
Money factor	0.721	4
Facility factor	0.754	3
Labour productivity	0.730	10

As shown in Table 1, in the current study, the alpha ranges from 0.721 to 0.895, confirmed that the data are reliable; thus, further analysis was done.

Table 2 Correlations

	Labour Productivity	Sig.
Organizational factor	0.623	0.004
Work environment factor	0.711	0.000
Money factor	0.870	0.032
Facility factor	0.356	0.013

As seen in Table 2, the variables of motivation, namely organizational factor, work environment factor, money factor and facility factor, are significantly and positively correlated with labour productivity. To test the hypotheses, regression analysis was done using SPSS. The results are reported in the tables below.

Table 3 Model summary

Model	R	R ²	Adjusted R ²	Std. Error
1	.515 ^a	.265	.260	.2127

a. Predictors: (Constant), FF, MF, WF, OF

a. Dependent Variable: Labour productivity

Table 4 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.424	3	1.207	20.613	.000 ^b
	Residual	2.160	117	.035		
	Total	7.585	120			

From the R² value reported in Table 3, it can be stated that the variation in motivation can explain 26.5% of the variation in labour productivity. The remaining 73.5% of the variation can be attributed to other factors. ANOVA results portrayed in Table 4 shows that the F value is significant at 0.01 level (F= 20.613, p=.000).

Table 5 Regression coefficients

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
(Constant)	3.116	.443			4.781	.000
Organizational factor	.349	.035	.455		2.622	.005
Work environment factor	.305	.192	.399		2.315	.016
Money factor	.446	.038	.449		2.988	.016
Facility factor	.192	.054	.211		1.287	.261

b. Dependent Variable: Labour productivity

The regression results in Table 5 denote that organizational factor, work environment factor, and a money factor of motivation have a significant positive impact on labour productivity. Based on the results, hypotheses 1, 2, and 3 are supported. The results show that the impact of the facility factor of motivation on productivity is insignificant. Therefore, hypothesis 4 is not supported.

Organizational factors' positive impact on labour productivity is consistent with the literature (e.g., Razak et al., 2014; McForson, 2012; Kalburgi & Dinesh, 2010). The work environment's positive impact on productivity is consistent with the reported studies (e.g., Kalburgi & Dinesh, 2010; Maduka & Okafor, 2014; Enshassi et al., 2007). Adair (2006) claimed that the work environment strongly affects labour productivity. The work environment includes working conditions, supervision, availability of equipment, and peer relationships. Workers' assessment of their work environment influences their productivity. The positive impact of the money factor on productivity is in line with the existing literature (e.g., Olomolaiye & Ogunlana, 1988; Kazaz, Manisali & Ulubeyli, 2008). McKenzie and Harris (1984) argue that money was the primary factor for construction workers. Money has the power to attract, retain and motivate people towards higher performance (McForson, 2012). The current study

revealed that the facility factor of motivation does not significantly impact labour productivity. The finding is not congruent with the literature. The incongruent results could be attributed to the sector and context of the current study.

CONCLUSIONS AND IMPLICATIONS

The study revealed that the organizational, work environment and money factors significantly impact labour productivity out of the four motivation factors. The facility factor does not significantly impact labour productivity. This study succeeded in meeting the research objectives, which aimed at identifying the impact of motivation on labour productivity. Further, the current study found that, by improving the motivation of the employees of the construction industry, it will be possible to increase the productivity of their employees. This study highlighted that, out of four motivation factors, the work environment is the most significant factor for increasing labour productivity. Therefore, by prioritizing the work environment, managers can enhance labour productivity. Even though the previous studies have proposed various motivation factors that affect labour productivity, the current study gives a different insight that the work environment factor is the most influencing factor of labour productivity.

The study's findings help understand the association between motivation and labour productivity. The study would provide a base for increasing productivity in the construction sector through the motivation factors identified as predictors of productivity.

Employee productivity differs based on demographic factors as well as based on psychological aspects. These are some essential aspects to be considered by future researchers.

Keywords: Facility factors, labour productivity, money factors, motivation, organizational factors, work environment factors.

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