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THE EFFECT OF MANAGEMENT BEHAVIOUR ON LEAN PROCESS IMPROVEMENT IN THE REAL ESTATE SECTOR IN GHANA

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ABSTRACT

Purpose: This paper is focused on determining the effects of Management behaviour on lean process improvement in the Real Estate Sector in Ghana. One of the fundamental requirements for the implementation of lean is not only the technical skills competencies and practices but also the soft skills such as management behaviours.

Design/Methodology/Approach: A random sampling technique was employed for the study. The population comprises 189 real estate companies operating within the industry in Ghana. 200 sets of questionnaires were administered. The data was analysed descriptively.

Findings: The findings indicated that management behaviours impact lean process improvement by ensuring that there is continuous improvement at the operational level to reduce cost and minimize waste. Furthermore, effective communication with employees significantly impacts lean process management as it helps employees get involved in the early stage of the lean implementation process.

Research Limitations: The paper focused on the effects of Management behaviour on lean process improvement in the real estate sector in Ghana.

Practical Implication: The knowledge advanced in this study will inform organizations of the need to achieve their corporate targets, the lack of effective steering negatively affects performance.

Social Implication: From the theoretical perspective, this study will help policy-makers in the real estate industry to review the existing policies which are geared towards helping the adoption of lean concepts in the industry.

Originality/Value: The originality of this study stems from the fact that the effects of Management behaviour on lean process improvement have a significant impact on lean process management implementation in the Real Estate Industry in Ghana.

Keywords: *Behaviours. improvement. lean. management. real estate.*

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INTRODUCTION

The success of lean implementation thrives on the existence of enhanced management practices and behaviours to drive the lean implementation process (Cadden, Millar, Treacy & Humphreys, 2020). There is no gain in saying the fact that soft skills factors such as employee participation and cultural norms and values directly affect lean implementation (Canning & Found, 2015). Raval, Kant and Shankar (2018) pointed out that training and development are critical enablers of lean management. One of the fundamental principles underlying the implementation of lean leadership is management and leadership behaviours. Another aspect of lean implementation relates to change management and organizational involvement. The more management can involve employees in the implementation process, the more implementation is made easy and enterprising. As a process lean leans itself toward a continuous improvement process (Graban, 2018; Rother 2009). As such, management and leadership must strive to build organizational capacity capable of supporting an enhanced lean project delivery (Oakland & Marosszeky, 2017).

Also, management should aim to improve the operational process and assignments to streamline its work to achieve coordinated results (Bortolotti, Boscari & Danese, 2015). Poksinska, Swartling, and Drotz (2013) underscored the need for management to make frantic efforts to fully understand the tenets of lean and make the arrangements to achieve a measure of success in lean implementation. Netland (2016) indicated that goal setting is very critical in undertaking continuous improvement. Milner and Savage (2016) therefore remarked that management behaviours are a requirement for achieving continuous improvement. This paper is organized as follows. Section two deals with a review of the literature, with the methodology discussed in section three. Section four focuses on data analysis. The implications of the study from the managerial and theoretical perspectives would be presented. This is followed by an analysis summary, conclusion and recommendations. The objectives are to determine the relationship between lean implementation and organizational process improvement; assess the effect of management behaviours on lean process improvement in the real estate company in Ghana and identify the challenges in lean implementation and recommend ways of improving the situation.

THEORIES UNDERPINNING THE STUDY

The theories of lean transformation, value generation theory and theory of constraints speak to the issues of process and operational improvements. These theories further explain the relationship between management behaviours and lean process improvement typically driven by desired management behaviours.

The Theory of Constraints

The theory of constraints utilizes the system's approach to construction development and borrows from the lean philosophy to significantly improve construction (Goldratt & Cox, 1984; Şimşit, Günay, & Vayvay, 2014). The theory seeks to identify all the issues and constraints associated with manufacturing and where it began. The initial focus of the theory was an attempt to identify

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all the weak links in the manufacturing process so that manufacturing will focus on the constraints militating against them in the short to long term. According to Gómez, Casas and Villalba (2020), five factors affect the smooth implementation of every construction activity under that system. These included analyzing and resolving identified challenges, performance measurement, coordination, improvement in activities and achieving profitability.

Empirical literature

There is much literature on the nexus between management behaviour and lean process improvement however, the literature remains inconclusive and with missed results. Some studies posit that there is a positive relationship between lean process improvement and the financial performance of the organization (Fullarton et al. 2003) while others found no financial effect on the performance of the organization (Jayaram et al.2008). However, it is generally agreed that lean concepts lead to waste reduction which boosts profitability and modifies processes (Browning & Heath, 2009).

Even though leads to process improvement, strong management behaviours are required (Netland et al. 2015). Others include effective communication and the creation of values. The leader should be visionary and motivate employees to excel in their responsibilities to achieve continuous improvement. Thus, active steering on the performance improvement framework is necessary to ensure continuous value addition at all times (van Assen, 2018).

The Role of Leadership

Throughout all organizations, it is the leader who leads staff and management and leadership is considered as the deliberate process to encourage people in the organization, provide guidance, control, structures, and resources and facilitate the implementation of activities as well as maintain relationships (Roberson & Perry, 2022). Lean leadership is a set of competencies, practices and behaviours to effectively implement projects (Poksinska et al. 2013). Lean management is therefore related to how leaders can facilitate continuous initiation and project coordination, implementation and the adoption of improvement activities. Chowdhury, Dey, Rodríguez-Espíndola, Parkes, Tuyet, Long & Ha, (2022) emphasized the need for leaders to adopt a strategic vision and mission to help create value for their organization as well as successfully communicate the organization's shared values and philosophies to employees and this will positively influence and impact lean adoption.

Conceptual Framework

The conceptual framework for the study was adapted from the study conducted by Poksinska et al. (2013) in which they argued that for effective process improvement to be achieved in any organization, particularly within the construction sector, there is the need for lean principles to be incorporated into the project. From the process perspective, one should look at steering

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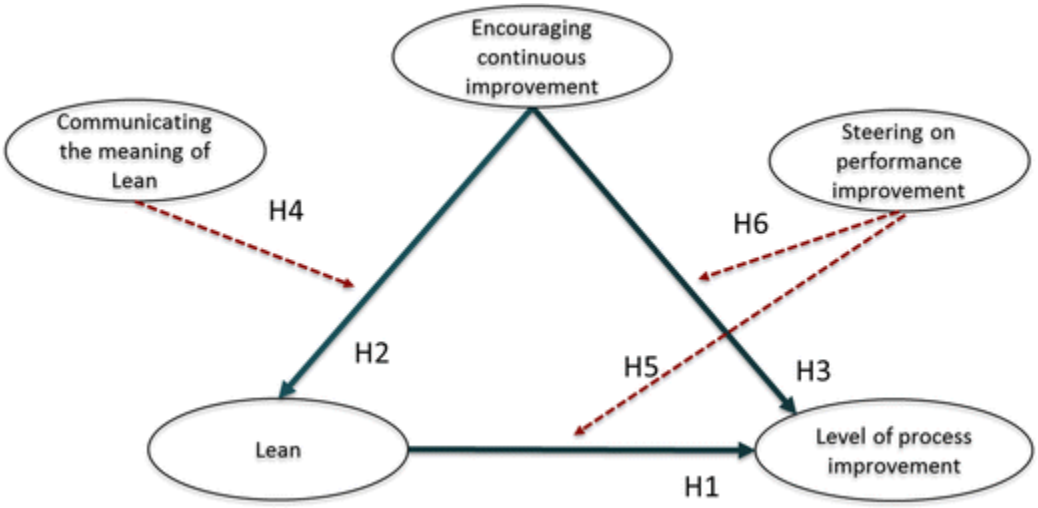
performance improvement, effective communication, enhancing continuous improvement and leading the whole discussion about the level of process improvement desired by the organization. Presented below is the conceptual framework that showed the relationships among all the hypotheses.



Adapted from Poksinska et al. (2013)

METHODOLOGY

The study adopted a quantitative case study to assess the relationship between management behaviours and lean process improvement. The research utilized a random sampling technique for the study. The population of the study comprises 189 real estate companies operating within the industry in Ghana who either have made attempts to implement lean or are already implementing lean. 200 questionnaires were administrated to these companies to ask specific questions relating to management behaviours and lean process improvement. The data gathered were summarized and analyzed using SPSS.

RESULTS AND DISCUSSION

The study was also conducted to investigate the nexus between management behaviours and lean process improvement and the results reflected the views of the respondents drawn from the real estate real industry in Ghana. The study also focused on the challenges and constraints militating against lean process improvement lean by identifying areas of strengths and weaknesses of the management behaviours. Multiple regression, correlation analysis as well as descriptive statistics such as mean and standard deviation were used to derive the results of the study.

The results of the descriptive analysis have been presented in table 1. From the results, it can be said that management behaviours have the greatest influence on lean process improvement with a

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mean of 4.5 against a standard deviation of 0.69. The finding is corroborated by the study of Costa, Lispi, Staudacher, Rossini, Kundu & Cifone (2019) who confirmed a similar position that . it is crucial the role of Top Management, which especially during the early stages of the implementation, must create the best conditions for the diffusion of Lean. This was followed by steering performance improvement and process improvement respectively which is in agreement with van Assen (2018) argued that with the absence of active steering on performance improvement by management, Lean does not result in process improvement. Also Encouraging continuous improvement and Effective Communication of lean recorded mean scores of 3.44 and 3.22 respectively and this is in agreement with the study of Heigermoser, de Soto, Abbott & Chua (2019) who reiterated that considering the short-term planning process, which promotes continuous improvement of future construction planning. While Size and Tenure did not significantly influenced lean process in the Real Estate construction industry. The result is in disagreement with the findings of Gavu, Gruehn, Schulte, & Asante (2019) who said that size and tenure are significant determinants of rent in Real Estate.

Table 1: Factors influencing lean process improvement

***N* = 189**	**Mean**	**SD**	**Rank**
Management behaviours	4.5	0.69	1
Steering performance improvement	4.21	0.6 7	2
Process improvement	4.20	0.66	3
Encouraging continuous improvement	3.44	0.45	4
Effective Communication of lean	3.22	0.72	5
Size	2.56	0.23	6
Tenure	2.34	0.56	7

Source: Field Survey 2019

Correlation analysis

Correlation analysis was used in determining the association between management behaviour and lean process improvement. From the analysis, it is significantly clear that there is a positive correlation between management behaviour and lean process management.

From Table 2, the most significant factor that affects lean process improvement was a continuous improvement, followed by performance improvement with correlation scores of 0.77 and 0.72 respectively. However, effective communication had 0.69, implying for the lean process to be

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achieved there is a need for effective communication with management and staff within the organization. Lastly, management behaviours recorded 0.65 suggesting that indeed management behaviours have a significant effect on lean process improvement.

Table 2: Correlation Matrix

	***N* = 189**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1	Encouraging continuous improvement	0.24	0.33	0.77**					
2	Steering performance improvement	0.51	0.73	0.51**	0.72**				
3	Effective Communication of lean	0.35	0.33	0.25	0.41	0.69**			
4	Management Beh.	0.48	0.17	0.63**	0.55	0.65**	0.45		
6	Size	4.01	0.85	0.04	0.04	0.1	0.07	−0.02	–
7	Tenure	0.73	3.08	0.03	0	0	0.01	−0.01	−0.41**

** $p < .01$, * $p < .05$ (two tailed Test)
Source: Field Survey 2019

Multiple Regression Results

From the regression analysis below, continuous improvement was regressed on effective communication and the control variables. From the results of the study, effective communication was statistically significant this is supported by the study of Bajjou and Chafi (2020) recommended that contractors need to improve communication with their staff on sites.

Table 3: Multiple Regression Results Continuous Improvement and Effective Communication of Lean

Intercept	Model 1		Model 2	
	b	*t*	*b*	*t*
	0.02	0.27	0.04	3.9
Effective Communication of Lean (ECL)	0.33	0.12	.22**	5.2**
Encouraging Continuous improvement (ECI)	0.45	0.55	.21***	5.34**
Management Behaviours	.06	0.53	0	0.01
R-squared	.15	.23	0.72	
Adjusted R-squared	.69	.56	0.44	
Control variables				
Size	0.2	0.70	0.02	0.20
Tenure	0.01	0.48	0.00	0.35
p =	0.00	0.00	0.34	0.03

* $p < .05$ level (2-tailed), **

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Table 4: Multiple Regression Result for management behaviours and Lean Process Improvement

Intercept	Model 3		Model 4	
	b	*t*	*b*	*t*
	3.44	4.78	6.73	13.5
Lean			0.59***	4.93
Encouraging continuous improvement (ECI)	0.12	0.14	4.10***	3.20
Steering on performance improvement (SPI)	0.33	0.42	0.22***	3.28
Management behaviours	−0.18*	−0.69	2.5*	3.02
R-squared	0.18	0.27	0.37	0.67
Adjusted R-squared	0.69	0.57	0.44	0.29
Control variables				
Size	−0.23	−0.68	−0.04*	−1.43
Tenure	−0.011	−0.40	−0.01*	−0.87

* p < .05 level (2-tailed), **
Source: Field Survey, 2019

This study indicates that one of the critical imperatives for achieving enhanced lean process improvement is management behaviours. The study found that continuous improvement has a positive relationship with lean process improvement. The finding agrees with the study of Aslam, Muqadas, Imran, and Saboor (2018) who argued that effective communication will reduce resistance to the implementation and prepare staff and managers to understand the tools, techniques and principles of lean. This implies that the extent to which managers will be effective and adopt lean process improvement has some bearing on organizational performance.

It was also noted that there is a direct relationship between active steering on performance improvement and process improvement. There was no direct relationship encouraging continuous improvement. The relationship between process improvement and lean had low-level steering performance improvement while it does for respondents with average levels of steering on performance improvement.

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CONCLUSION

The study has both theoretical and managerial implications. From a theoretical perspective, the study explains how the value theory improves process flow to generate customer-centric requirements and standards. For real estate companies to be profitable, they should reduce cost and wastage and add value to the customer's business. In the first place, management should make it a point to develop training for staff to facilitate the implementation of lean.

The results of this study also demonstrate that given the fact that organizations need to achieve their corporate targets, the lack of effective steering negatively affects performance. The implication is that anytime management spends quality time to improve corporate performance, there is a resultant effect on lean process management.

Management should streamline their operations and commit their management and staff to fully participate in goal-setting with the view to achieving continuous improvement. Another important implication of the study is that lean process improvement forces management to adopt a particular line of production to be either commitment-focused or control-focused.

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