
Influential Factors for Undertaking BPR on Construction Industry to Improve Contractors Performance in Tanzania

Ramadhani Said Tekka

College of Architecture and Construction Technology, Department of Construction Management and Technology, Mbeya University of Science and Technology, Mbeya, Tanzania

Email address:

ramsotekka@yahoo.co.uk

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Abstract: The construction business in Tanzania has been acknowledged to face an increased competition resulting from globalization. Correspondingly, the construction business has occupied incredibly & everlasting challenges flabbergasted with time & cost overrun, insignificant quality, poor safety, and ecological unsustainability leading to inadequate general performance. The challenges have compelled most construction firms to become innovative to redesign the business and adopt the change approaches. The innovation approach has established and engaged the extra efforts and a persistent follow-up to attain the practicable and worthwhile resolution. Business Process Reengineering (BPR) has been touted as a propitious strategic management practice and a management change approach for attracting, elevating the competences & efficiencies, bringing great solutions and gaining a competitive advantage for construction business dramatic improvement. An exhaustive literature review, an in-depth interview, and a descriptive quantitative research tactic were assumed for this study to gather an opinion from 202 experienced experts that helped to attain the findings. SPSS-AMOS software was applied during data analysis to obtain the descriptive, inferential statistics and a structural model as findings to support the study conclusion. However, the identified BPR factors could help provide alternative thinking of influencing undertaking BPR on the construction industry to improve construction business performance in Tanzania.

Keywords: Construction Industry, Construction Management, Reengineering, Performance

1. Introduction

Like many counterparts in other emerging economy countries, the Tanzania construction industry (CI) plays a significant role despite its associated challenges led by a prolonged flawed construction project's performance mostly executed by limited local contractors who won the bid. Excitingly, it is worse to note that, while foreign contractors constitute less than 10% of registered contractors in Tanzania, they account for more than 60% of civil construction project's value. Thus, the small market share of local contractors is attributed to the incapability of local contractors to demonstrate technical knowledge leading to closing the project with low quality or with variations to original quality as provided in the technical specifications [1]. The situation has frustrated the nation's development process, leading to immeasurable costs to the project stakeholders, such as the community. The case has led to a loss of reputation to local

construction parties, including contractors, consultants, project managers, subcontractors, and suppliers [2]. [3] Recognized that CI practitioners had witnessed malpractices, unethical behavior, lack of technical and construction management skills. However, inadequate performance has been reflected on minimal involvement of local contractor firms [4] in local construction projects, the slow and challenging growth trajectory of a construction business, the firm's inadequate capacity [5], and insufficient performance atmosphere to local contractors [4] measured in terms of weak deliveries.

Most construction firms have severally adopted various measures, including rationalizing and computerizing their business to improve their performance. However, neither of these measures has shown correct business operations improvements. Moreover, many firms have also spent millions of dollars introducing and implementing new technology, hoping for a positive change. However, the

struggle has failed to attain the intended objective rather than increasing the running cost of firms with minor performance improvement [6]. Additionally, in Tanzania, various strategic management techniques such as TQM, Lean, and KAIZEN, to mention a few, have been adopted, and studies were undertaken on the public sector service industry to improve performance. However, very little to almost none have been covered in the construction industry. Thus, this study sought to investigate the motivational factors for undertaking BPR in construction management processes.

2. Literature Review

2.1. Construction Industry

The construction industry (CI) has been envisaged globally as a sector of the economy that converts various resources into constructed physical-economic and social infrastructure necessary for socio-economic development [7]. It is also widely recognized in the mainstream of construction economics as a vital sector with a decisive role in accelerating the wheel of economic growth of any country [8]. The CI accelerates and promotes income distribution, poverty reduction, supports a large-scale, and provides a broader eco-system of enterprises for social-economic stability and well-being [9]. Commonly, the CI contributes significantly to the Gross Domestic Product (GDP) and Gross Fixed Capital Formation of almost all nations [10]. Furthermore, the CI improves productivity, quality, and everyday life and thus acts as machinery for creating employment and offering various job opportunities [11]. Further, it generates income, increases domestic resource consumption, and acts as a determinant for social-economic development that stimulates the growth and advancement of other linked sectors, enhancing national economic growth.

Tesha et al. (2017) acknowledged that the construction industry's significant influence on socio-economic development depends entirely on construction business firms' growth [12]. Nevertheless, [13] classified two different firm business growth meanings as improving quality performance or production and changing in the firm's volume or size because of process developments. The CI's considerable role can be confirmed through its economic contribution to the national Gross Domestic Product (GDP). While the sector represents about 13% of global GDP [14], it contributes more than 10% of the industrialized and developed economy countries and about 7% of GDP to emerging and less developed Countries [15]. The CI in Tanzania has become exciting and ranking among the top three sectors superseded by agriculture and trade, contributing significantly to uplift the country GDP. Its contribution to country GDP has attained a steady growth from 8.8% (2008) to 15% (2017) with an average rate of 11.1% [16] and with a high share rate of the gross fixed capital formation (GFCF) ranging between 25% to 34% of GDP [17]. In addition, the sector also offers more than 9% of employment opportunities [18]. Moreover, the industry has been stimulating other sectors of the economy.

Despite the considerable contribution of business contractors, its performance in the domestic market has attained inadequate performance continuously in terms of construction time, cost, quality, environment, and safety [19]. However, the construction firms have been confronted by increasingly numerous constraints, including lack of appropriate strategies for firm development [20], low Productivity, low predictability, Lack of skilled, competent, and experienced labor, low technology and adoption of general strategies, imperfect performance process, lack of enough experience and poor historical performance. Various led-initiatives have been undertaken to foster the Contractor business (CB) to attain adequate performance improvement unsuccessfully. Initiatives include the establishment of agencies and boards, the formation of the national construction council (NCC), the establishment of Public Procurement Acts (PPA), and the establishment of Construction Industry Policy (CIP) of 2003. The CIP aimed to provide mechanisms for improving local contractor's and consultants' capacity and performance, improving quality and productivity, promoting technological development, promoting sustainable construction practices, mobilizing adequate financial resources, and enhancing construction equipment availability.

2.2. Reengineering

The increased competition tied with world technological advancement, which necessitated the free market, has compelled many construction firms to adopt an innovation system as a solution approach. The solution approach could improve productivity and profits while reducing costs, improving turnaround times, and improving quality or better service to the customer [21]. Similarly, the overall global economy's nature has placed the BPR at the core of effective organizational management. BPR is the most effective and recent management technique used to govern and oversee the business functions with coordinated tasks and activities to accomplish the intended corporate objectives. BPR can be characteristically distinguished from other forms of process improvement, including cross-functionality, radical change, operations across the organizations, paradigm shift, and involvement in innovative technology [22].

Various BPR definitions have been provided. The best-adopted definition encompasses three fundamental concepts [23]: The first concept comprise 'rethinking,' which describes an understanding of the firm's business, including its characteristics, the nature of the overall operation, and the forthcoming changes obligatory to attain competitive advantage [24]. The second defines the 'radical redesign' that brands the firm to forget the traditional way of working and think critically about innovative and strategic business functions. The last reflect on critical aspects to pursuing a process's perspective. BPR has been adopted to allow construction firms to create value through potential roles, identify tangible resources, and value activities that can help firms circumvent the outdated traditions of doing business and adjust to adopt changes in their construction environment.

Additionally, during organizational change management, [25] recognized BPR to add a strategic value through the provision of new strategic vision, building of operational capabilities, re-evaluating new strategic options, and redefining the new products/services to reflect the firm's overall strategy. Shodhgang (2008) added that BPR is a technique that involves restructuring, redesigning, and reengineering other functions. It therefore assesses and creates an amendment of strategy, process, technology, organization, and culture of business within an organization [25]. Equally important, a Successful adoption/adaption of BPR has resulted in perceptible competitive benefits of firms through customer satisfaction, reducing cost, increased productivity, superior flexibility, and improved coordination [26]. BPR contributes significantly to changing the firms' process and behavior to become competitive, improve the capacity and capability, satisfy customers, employees, and other stakeholders who wish for dramatic results that may help a firm survive in the long term [27].

A practical example has been drawn from India's BPR Project of Income Tax department in 2007 conducted at 15 locations, including metropolitan cities, mofussil, etc. The project has benefited from expanding BPR to its many branches, increased performance, and increased revenue [28]. Despite various challenges witnessed, the Wrigley Company (East Africa) Limited, located in Kenya, commenced implementing BPR in 2001, known as Web Esprit. The company adopted the supply chain concept and the Enterprise Resource Planning (ERP) technology named Systems Applications and Products Release 3 (SAPR/3) to enable BPR. In 2004, the established BPR to Wrigley Company witnessed an increased supply chain performance system through a successful, established Global Reference BPR Model implemented by Deloitte International [29].

Moreover, in Ethiopia, the Ministry of Capacity Building in 2001 and subsequent training to orient other ministries and capacitate civil service offices improved service delivery through established Business Process Re-engineering in the government systems. The successful BPR result in 2007 documented an improved efficiency of service provision in the Ministry of Trade and Industry measured from the registration and licensing service's reduced cycle time from 43 days to 30 minutes [30]. The Ministry of Agriculture and Rural Development has also shortened the cycle time to prepare fieldwork teams from 10 days to two hours. Furthermore, The Addis Ababa Transport Office has witnessed a reduction of driving permit renewal cycle time from two hours to 45 minutes and shortening tax collection's cycle time for cargo import/export goods from 45 minutes to 13 minutes to Ethiopian Customs and Revenue Authority [31].

A study was conducted to analyze the effect of BPR implementation on Multinational corporations (MNC) as a manufacturing industry witnessed a 25% increase in improved processes operations efficiencies that have increased product productivity [32]. Thus, the BPR has involved a redesign of processes through established success factors such as increased interfaces between department operations, review,

human resources management, working within times bound, reducing operational costs, and emphasizing quality standard assurance and needs. However, the reengineering process resulted in a reduced product delivery time from six to two months. A study conducted by [33] in Southern Africa, a developing country focused on the successful BPR project named ASSA ABLOY, reported an improved performance in transforming the Pin Tumbler Department production process. The study's findings recognized a dramatic change in a workflow that facilitated an enhanced performance in efficiency and effective production and quality service delivery rated at an increase by 42% with safety improvement and 50% performance increase.

Consequently, BPR has practically been identified as one of the most popular strategic management tools/approaches that has attracted much attention from businesses, manufacturers, and practitioners to bring tremendous organizational change. However, BPR has attained a low satisfactory level in the CI due to its non-existence practically rather than in literature and its uniqueness [34]. The reason mentioned for its nominal adoption rate was the non-implemented majority of reengineered initiatives that indicated change resistance. Also, it includes the uniqueness of the industry [35]. Its non-implementation in CI consists of a systematic and collaborative process, which allows the interface between varied process participants and lack of improvement efforts [36].

Henceforth, BPR is a valued tool that has been applied as a substantial driver toward a dynamic change within many organizations [37]. It contributes significantly to changing the firms' process and behavior to become competitive, improve the capacity and capability, satisfy customers, employees, and other stakeholders who wish for dramatic results that may help a firm survive in the long term [27]. Notably, a successful adoption/adaption of BPR has resulted in perceptible competitive benefits of firms through customer satisfaction, reducing cost, increased productivity, superior flexibility, and improved coordination [26]. Furthermore, [38] added that BPR had been perceived by Simon (1994) to consist of four potential strategic factors: strategies, value functions, and human resources as experts and technology as BPR enablers. Strategies and processes occupy the responsibilities of building the foundation that enables the utilization of technologies and the redesign of the human activity system. Thus, BPR commonly focuses on the core business functions that create value by its capabilities to improve performance and or competitiveness [39]. These factors and functions are those that the business strategy has identified as critical for improving its performance and becoming competitive. [40] Conducted a study that revealed four factors for business process reengineering (BPR) implementation. The factors included management commitment, customer focus, use of IT, and communication of change.

Moreover, in their study, [41] provided summarized BPR factors classified into five key categories: leadership, collaborative working team, top management commitment, resources, and the use of information technology. Furthermore,

the management or leadership's ability to lead, becoming adaptive, and manage the changes was considered the most crucial factor by many researchers. In his study, Carr (1993) itemized that:

“Change management, which involves all human and social-related changes and cultural adjustment techniques, is required by management to facilitate the insertion of newly-designed processes and structures into working practice and to deal effectively with resistance [42]”.

Besides [43], Stressed other factors such as “sufficient authority and knowledge, proper communication as important for organizational resistance during BPR implementation.”

The last but not the least factor was adequate, competent, skilled, and experienced human resources team. Building an adequately creative and credible human resource teamwork was acknowledged for effectively and efficiently innovative ideas to bring radical changes in the organization [44]. However, they should be composed of different departments, inside and outside an organization, which can be openly and actively consulted at every stage. The human resource team for BPR should be and skilled with work clarity [45].

Generally, according to authors (Table 1), the BPR paradigm has been dealt with and mainly addressed by many researchers while categorized into three fundamental perspectives, namely Strategic, Operational, and Organizational.

Commonly, BPR incorporates a radical redesign that focuses on strategic factors and functions that aims to attain a substantial firm's improvements in reducing cost, timely delivery, and quality of service. It has played a significant role in changing the performance of the sectors and organizations in particular. Different effects noted as a result of adopting BPR include reducing the redundant performance process within an organization, reducing and saving the production time that has eliminated delay and proportionally affected the production cost. This quality increase increases revenue and hence increases the firm's market share and improved decision making. In totality, BPR has, to a great extent, improved firms' performance and consequently maximize the firm's potential. Generally, BPR is considered an alternative strategic management thinking used to help smooth the construction project and hence attain the contractor's performance improvement.

Table 1. A Theoretical Perspective Summary of BPR Factors.

Authors	BPR Perspectives	BPR Attainment Factors
Davenport (1993)	Strategic and Operational	Combination of industrial engineering, quality movement, technological innovations
Harrington (1991)	Strategic and Operational	Quality movement
Hammer and Champy (1993)	Strategic, Operational, and Organizational	Change Management Strategic I. T Process Innovation
Rigby (1993)	Strategic, Organizational and operational	Scientific management Value analysis Strategic management Strategic I. T
Zairi and Sinclair (1995)	Strategic, Organizational and Operational	Industrial engineering Change management Process innovation Management Change management
Jarrar and Aspinwall (1999a)	Operational & organizational	Human resource management Process innovation Management Management competence
Al-Mashari and Zairi (1999)	Strategic, Organizational and Operational	Change management system and culture Organizational structure BPR Project management I. T infrastructure Strategy Top management
Terziovski, Fitzpatrick, and O'Neill (2002)	Strategic, Organizational and Operational	I. T and process redesign Customer focus BPR project Performance outcomes Teamwork and quality culture Quality management system and reward
Ahmad, Francis, and Zairi (2007)	Strategic, Organizational and Operational	Change management Less bureaucratic & participative style Project management Adequate financial resources Management commitment
Chiu and Cheng (2008)	Strategic, Organizational and Operational	Customer focus Use of I. T Communication of change

2.3. Performance

Despite researchers' efforts to determine the performance concept measures, the topic has always remained of much interest to researchers and management teams. There is still an ongoing debate among many scholars, stakeholders, and practitioners on the subject matter. The performance concepts have created much confusion when traced from various literature [46]. The Preceding literature has acknowledged performance as a complex concept to define, describe analytically, and measure [47]. Researchers have adopted interchangeable terms, including efficiency, improvement, effectiveness, growth, and success [48].

Nonetheless, its interpretative meaning has still not been clearly understood by various stakeholders such as consultants, policymakers, employees, contractors, and investors [49]. Equally, despite the multidimensional performance concept, [50] contended that, over various definitions she had reviewed on performance from different literature, all had shown a common characteristic related to efficiency and effectiveness. Effectiveness is considered an indicator of the extent to which an intended objective or goal can be attained. Simultaneously, efficiency describes an indicator of resources to be consumed towards achieving a certain level of achievement. However, despite the term's misperception, the weak performance of contractors has been widely reported in various literature [51].

In the current global competition, CI has been occupied by a continuously changing environment. Any construction firm must comprehend and monitor its performance [52]. The situation has made many firms struggle to attain an improved and or competitive performance. Traditionally, the successful performance of contactors is evaluated based on adherence to construction time, budget, quality, safety, and environment to satisfy the client [53]. However, the recently emerged vision claimed that client satisfaction should be considered a remarkable feature in analyzing performance in construction. Subsequently, this led to multiple variables to measure the performance [49], recognizing other practitioner's or stakeholders' satisfaction, including clients as the owner, employees, suppliers, and distributors [54].

Various literature has acknowledged the poor performance of many contractor firms while revealing the significant connected challenge. A study conducted in South Africa by [55] mentioned the internal factors characterized by management competency and skills, access to finance, technological capabilities, and external factors encompassing competitions from external enterprises, government bureaucracy, and tax compliance laws. A study conducted in Indonesia revealed low performance to national private CI players involving the consulting firms and contractors. It argued for their struggle to improve their performance in terms of service, competition and thus, gain their competitive advantage. The study findings proposed applying the strategic management concept as an alternative solution to resolve the challenges. Further, [56] conducted a study on the

Management features of small-medium-sized contactor business enterprises in Russia recognized the need and importance of constant training, quality management, and management culture as essential ingredients to improve its performance efficiency.

Similarly, a study conducted by [57] recognized the global market competition, global financial and economic crises, customer's needs and preferences changes, multi-transnational corporations' occurrence resulting from free boundary market and ICT challenges to cause a high downfall rate of small contractors within a short limited period after their commencement. Conversely, [58] presented a list of challenges facing small and medium contractors leading to inadequate performance. Challenges include; shortage of resources, insufficient budget, incapacitation on products and service quality improvement, inefficient and ineffective technologies leading to low productivity, absence of research and development, and lack of training to acquire new knowledge utilization. However, the study emphasized and recommended thorough planning and operational process decisions during innovation implementation. Nonetheless, the government support strategy was acknowledged, including facilitating knowledge sharing, fund, and expert advisory provision and improving the innovations and technology adaptations to small contractors. Thus, it is understood that contractors are more exposed to economic changes as a significant challenge facing small-medium firms relatively are higher than the large ones [59]. Therefore, it is recommended to find and establish the survival strategy models for contractors against opposing challenges to preserve their performance. Thus, this study intends to develop the structural model that examines the influence of BPR as a strategic management technique on construction management functions to improve contactors' performance in Tanzania.

3. Materials and Methods

3.1. Survey Development & Description

This study aimed to identify the influential BPR motivational factors among Tanzania CI practitioners to improve contractor performance. The gathered survey information has facilitated customization of BPR implementation factors for Tanzania CI. The survey questionnaire written in both Swahili and English language to provide help for a clear understanding of the topic item contained three sections. Section one aimed to acquire the respondent's demographic information. Section two intended to capture the respondent's awareness and perception level on the BPR concept. To attain this, questions such as (i) "Have you heard about BPR?" (ii) "Have you ever performed BPR in your firm?" (iii) "Do you think BPR is important for your firm and Tanzania CI in particular?" The last section intended to understand the degree of influence of the provided list of challenges and motivational factors for undertaking BPR as referred to Tanzania CI.

3.2. Methods

3.1.1. Data Collection

The data were collected from the CI stakeholders who participated in the joint annual consultative meetings & exhibitions (2019), held at Diamond Jubilee-Dar es Salaam from 4th -5th September 2019. Using the purposive sampling technique, data were collected from experienced event participants as respondents comprised of architects, estate developers, quantity surveyors, contractors, engineers, and allied professionals. The authors assumed that most respondents were unfamiliar with BPR. Therefore, he tried the best degree possible to provide a concise but clear description of the concept that facilitated 89 questionnaires. Moreover, the author purposively visited other offices (public and private)

firms in September, which helped administer 55 questionnaires.

3.1.2. Data Analysis

To achieve the study objective, respondents were given a comprehensive list of motivational factors adopted from literature and asked to provide opinions through a ranking process regarding their effectiveness, importance, and or acceptability towards BPR undertaking influences on CI. The ordinal five-point Likert-like scale indicate a range from 1-strongly not effective/strongly not important/non-acceptable to 5-strongly effective/strongly important/extremely important was opted (Table 2) to capture the contribution and or a significance order or degree levels of a particular BPR factor from a list of factors.

Table 2. Example of Survey to Present the Influence Degree of Item.

Motivational Factor	Factor Description	Degree of Influence				
		SDA<	-----	>SA		
Value & Innovative process management (IPM)	It is a systematic approach to nurturing the creative capabilities of employees and creating a workplace environment Ability to identify the value and innovative process	1	2	3	4	5

Note: SDA=Strongly Disagree; SA=Strongly Agree

Since the scale and measures of this study were adopted from the literature, it was crucial to test them. Therefore, data examination was conducted to test the internal reliability of the 5-point Likert scale. The test aimed to check if the questionnaire instrument provides the same results (equivalence) at different sets of trials [60]. The analysis results yielded a Cronbach's alpha coefficient of (0.781) among the five Likert scale factors. However, the computed value was above the recommended and acceptable value of 0.7 [61]. After that, the Relative Importance Index (RII) was used to determine the relative importance or influence of factors based on stakeholders' responses. However, the RII formula has been provided below. Practically, ranking of factors was completed based on RII established by combining the whole respondent's responses.

$$\text{Relative Importance Index (RII)} = [\sum W] / (A * N); (0 \leq \text{RII} \leq 1)$$

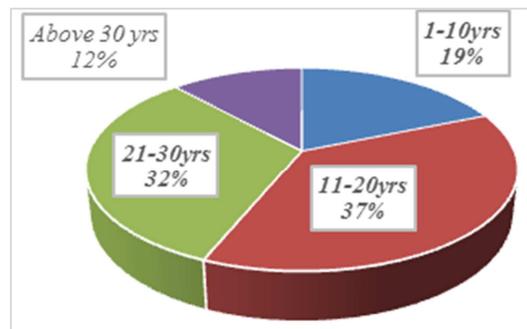
Where: W; Define the weight (1-5) given to each factor by the respondents; A; explain the highest weight (i.e., 5 in this case) and; N; describe the total number of respondents (144). Thus, this paper consists of three analysis subsections. While the first offers the respondent's demographic information, the second provides the respondent's perceptions on BPR. The latter presents the degree of contribution attributed to each of the factors manifested from the literature.

3.3. Results

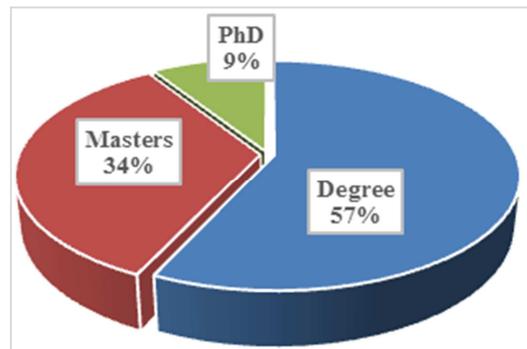
3.3.1. Respondent's Characteristics

All respondents hold a degree qualification and above. Out of 144 questionnaires administered, 82 (56.94%) reported holding a bachelor's degree, 49 (34.03%) had a master's degree, and 13 (9.03%) had a Ph.D. degree. Additionally, 27 (18.75%) had an experience of 1-10years, 54 (37.50%) had an experience of 11-20years, 46 (31.74%) had experienced

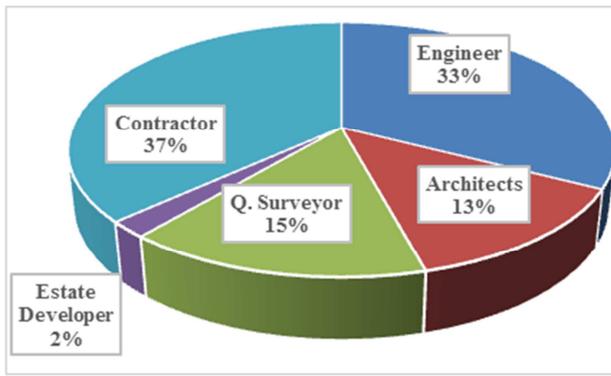
between 21-30years, and 17 (11.81%) had worked in CI for over 30 years. Moreover, respondents contains 32.64% engineers, 13.19% architects, 15.28% Qs, 2.08% estate developer and 36.81% contractors. The collected respondent's information (Figure 1) was reasonable to justify the correctness and suitability of the information collected. They were sourced from educated and well-experienced stakeholders from the Tanzania construction industry.



(i) Experience



(ii) Education



(iii) Cadre

Figure 1. Respondent's Demographic Information: (% Approx.).

3.3.2. Respondent's Perception of BPR

As explained in part 2.1 above, the survey involved various items measuring the respondent's perception of BPR and its influence on performance improvements. (Tables 3 and 4) describe the respondent's perception extent and its impact on improving performance.

Table 3. Respondent's Perception on BPR.

Perception Item	Measurement Scale	
	Yes	No
Have you heard about BPR?	141 (97.92%)	3 (2.08%)
Have you ever experienced BPR in any firm?	79 (54.86%)	65 (45.14%)
Have you ever performed BPR in your firm?	74 (51.39%)	70 (48.61%)
Do you think BPR is important in your firm/Tanzania CI?	144 (100%)	-

Almost all (97.92%) respondents who participated in the study agreed to have heard about BPR. Moreover, more than half (54.86%) have agreed to have experienced BPR in their firms, and 51.39% have already practiced it at a different pace. However, those who had no idea about BPR were given a brief explanation. After the description, all respondents agreed on its importance to any construction firm and the Tanzania construction industry. After that, the evaluation of its significance was conducted during a survey. The findings (Table 3) noted the majority, including 97 (67.36%) and 41 (28.47%), who strongly agreed and just agreed respectively to be influential towards performance improvement. However, 6 (4.12%) recognized not to be sure of its influence on a PI.

Table 4. Perception of BPR towards Performance Improvement (PI).

Perception Item	Measurement Scale
Do you think BPR can influence performance improvement (PI) in CI?	Response (%)
Yes, it can strongly influence PI	97 (67.36)
Yes, it can influence PI	41 (28.47)
I am not sure of that	6 (4.12)
No, cannot influence PI	0 (0.00)

3.3.3. BPR Influential Factors

The levels and extent of thirteen (13) factors influencing or motivating BPR undertakings were explored and described in Table 5. As described in section 2.3, RII was used to compute the degree of influence of each factor and helped to rank the element in order of effect. As shown in (Table 5), competent and committed leadership occupied a mean value of (M= 4.52) was ranked the first and foremost influential and or motivational factors for undertaking BPR in Tanzania CI, followed by firm-owned resources utilization & control (M=4.49). Capacity building such as training scored a mean score value of (M=4.42) was ranked the third followed by BPR team change Composition & culture with a mean value of (M=4.40) ranked the fourth. Experienced and skilled human resources scored a mean of (M=4.33) ranked the fifth among the considered influential factors to motivate BPR undertaking. Surprisingly, Information Technology & management scored the low mean value (M=3.95), followed by BPR redesign evaluation & control, achieving the lowest mean value (M=3.90). However, the low score of information technology which has been recognized as a crucial factor and BPR enabler by many works of literature was perhaps due to the circumstance that information technology (IT)

infrastructure has not developed or matured in Tanzania CI other developing countries. Thus many CI stakeholders still do not recognize or value it.

Conversely, different CI stakeholders could have assigned various influential degrees of BPR motivational factors depending on their capabilities. For example, stakeholders from foreign construction firms could opt for IT as an enabler since they are well equipped with IT facilities with more concern about it than local firms that could be more concerned with management issues. Thus, the findings of this study may vary depending on the respondent's types, experience, and the most challenging concern faced.

4. Discussion

The respondents' perception has considered BPR as an essential strategic management technique to be adopted to improve performance. The findings have realized that other CI stakeholders in Tanzania are not acquainted with BPP despite their acceptability of its importance upon the description given by the researcher. Following is the discussion on the most top-five influential factors. However, the eleventh factor has been discussed because of its exceptionality.

Table 5. BPR Influential Factors.

Motivational Factors	Respondent's Frequency (N)					Total N	ΣW	RII $\Sigma W/AN$	Rank
	5	4	3	2	1				
Innovative process management	73	45	25	1	0	144	622	4.32	6
Employees recognition and rewards	75	41	26	2	0	144	621	4.31	7
BPR team change Composition & culture	86	39	11	6	2	144	633	4.40	4
Presence of aligned strategies	68	53	12	8	3	144	607	4.22	8
Good organizational structure	56	49	25	13	1	144	578	4.01	10
BPR redesign evaluation & control	54	42	33	9	6	144	561	3.90	12
Information Technology (ICT) Infrastructure	61	40	21	19	3	144	569	3.95	11
Competent and committed leadership	83	53	8	0	0	144	651	4.52	1
Experienced and skilled human resources	67	61	13	3	0	144	624	4.33	5
Integrated BPR department	51	66	23	4	0	144	596	4.14	9
Capacity building e.g. Training	73	61	8	2	0	144	637	4.42	3
Proper Communication channel for change	58	63	19	4	0	144	607	4.22	8
Firm owned resources, utilization & control	81	55	6	2	0	144	647	4.49	2

4.1. Competent and Committed Leadership

A competent and committed leadership was the topmost ranked and thought to facilitate BPR implementation. Leadership management participates in strategy formulation and provides an absolute commitment throughout the whole implementation process. Leadership needs to possess characteristics such as being educated, strong, effective, visible, innovative, committed, and creative in thinking and understanding the reengineering process's complexities. The committed top leaders are required to explain clearly to employees the need for change and its effects on employee's well-being and the provision of clear organization's future outcomes. Moreover, leadership facilitates and influences employees' interactions positively; they create an excellent organizational environment for workers to ensure reasonable job satisfaction while attaining the organizational goals [62].

4.2. Firm Owned Resources, Utilization, and Control

Owning and maintaining resources was noted among the second top competitive factors for BPR implementation. Apart from resources owned, they need to be carefully sustained, adequately controlled, and effectively utilized. Resources include skilled assets such as land, equipment, and plant. Similarly, human resources, finance, and technology. Owned resources can be applied as collateral for loan security in a financial institution [63]. Therefore, resources play a significant role in BPR implementation.

4.3. Training

Several researchers have acknowledged training as a vital factor for a successful BPR implementation. A study by Herzog. et al.(2007) invented that training employees on essentials of reengineering contribute helping them accept, easily understand, adapt the new processes to be undertaken and the technology to be adopted to facilitate the reengineering process [64]. Moreover, a study conducted by [65, 66] acknowledged a strong correlation between employee training and successful BPR implementation. Therefore,

training needs to be considered necessary to all employees.

4.4. BPR Team Change Composition & Culture

BPR team and Culture was found among the essential factor for BPR undertakings. While the BPR team change involves competent and experienced team members, Culture incorporates informal rules, customs, beliefs, values, attitudes, and behaviors of a particular group of people that figure out their daily activities and practices and distinguish one group of people from another [67]. Culture stimulates the organization's capability and capacity to adapt to change and provides the guidelines to get along with the organization's changes. It contains various dimensions such as collectivism and collaboration, and uncertainly avoidance. Others include human and performance orientation, motivation, formalism in processes, assertiveness, trust, and rationality [68], to mention a few. To attain a dramatic change through BPR, they need to conform to the newly redesigned culture and a well-composed team to uphold the change and avoid the old and inappropriate ones. The findings of this study coincide with the results of Zairi and Sinclair (199), who devised that, "*Revision of reward systems, communication, empowerment, people involvement, training and education, creating a culture for change, and stimulating receptivity of the Organization to change are the most critical factors related to change management and establishing a culture of performance measures.*"

4.5. Experienced and Skilled Human Resources

The study's findings have revealed the skilled and experienced human resources team as critical or a successful reengineering process [69]. Building human resource teamwork will effectively and efficiently produce an innovative idea and use various skilled techniques to bring radical changes in the organization [44]. During reengineering, the employee's team should be composed of members from different departments, inside and outside an organization, who can be openly and actively consulted at every stage. The human resource team for BPR should be creative, credible, and skilled with work clarity [45].

4.6. Information and Communication Technology Infrastructure

The finding of this study has surprisingly shown a negative acknowledgment of IT infrastructure towards BPR implementation contrary to other previous researcher findings. Various researchers have considered IT infrastructure a crucial factor and a potential enabler for a successful BPR implementation. Technology can be defined as the materials and processes used to transform the inputs into outputs. As described by [70], it comprises a soft and hard component that accumulates scientific knowledge, technical skills, logical habits, and material products of people, information, and logic. Infrastructure includes effective identification and understanding of technologies enablers that can facilitate the redesign of business processes, appropriate choice of IT. Platforms, effective adaptable, flexible, and suitable installation of IT components [45]. Moreover, while communication helps market the BPR process and understand the dramatic changes required within the business process [71], information technology plays a significant role as an enabler or driver to process reengineering [72]. Technology assists in creating a capability in making alternatives operational solutions economically feasible [73]. Conversely, IT helps execute the business strategy and improve the business process through the workflow management system, automation, Enterprise Resource Planning (ERP), database, and network-related technologies. Thus, the findings of this study on IT could probably be the failure of respondents to correlate IT with BPR or because IT is still not matured in the construction industry of various developing countries such as Tanzania compared to its potential and used in developed countries.

5. Conclusion

The popularity of BPR has grown over the last two decades. Its acceptance and adoption intensities have increased and seems to remain attractive as long as the challenges to its adoption are overcome. The successful adoption and implementation of BPR management technique have revealed a performance significance to different sectors. However, little improved performance on construction industry resulted from little of its adoption. However, although the importance of BPR to improve performance is well recognised, its adoption and implementation or practices which would undoubtedly appear to be the alternative solution to recent and forthcoming problems in Tanzania CI does not look promising. To this point, being among the BPR potential study undertaken in the Tanzania construction industry context, the authors' aim for this survey-based study was to explore the CI practitioners' awareness, and understanding the BPR and its motivational factors and assumed to be the stepping stone for a successful BPR adoption. Furthermore, awareness and understanding extent of the BPR motivational factors were quantified, to inspire an extensive implementation and practices of BPR improve contractor's performance

improvements.

A questionnaire survey was designed to ask experienced CI industry practitioners' viewpoints regarding BPR to prioritize the manifested motivational factors from relevant literature in regards to Tanzania CI context. The study findings suggest that the respondent's level on BPR understanding was almost middling. The results of statistical analysis showed that the most top 5 drivers including competent and committed leadership, firm owned resources, utilization, and control, training, presence of team change composition & culture and experienced and skilled human resources were identified and prioritized to motivate BPR implementation. Moreover, incentives particularly financial incentives to promote BPR implementation among employees would be important to facilitate a self-drive towards BPR adoption, implementation and practices.

Although the outcomes of this study were a short scoping exercise, the findings of this study have drawn and enhanced a sufficient understanding about the current understanding state, practices and general image of BPR implementation factors in Tanzania CI representing a typical developing countries. However, the findings has formed a significant foundation for future BPR perspectives in Tanzania and has described that the factors are strong enough to motivate policy makers & CI stakeholders to address the challenges and invest in overcoming them. Thus, though the study aims were attained, further research based on a larger sample size of practicing professionals is recommended.

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