

Collaboration and Management Techniques for The Expansion of Small and Medium-sized Enterprises (SME) Contractors in Cape Coast Metropolis, Ghana

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ABSTRACT

The construction industry, spearheaded by small and medium-sized enterprises (SMEs), plays a vital role in economic development and poverty alleviation. Yet, numerous SME contractors need help to expand, hindering their potential contribution. To address this critical gap, this study explored the factors influencing building contractors' growth in Ghana's Cape Coast Metropolis. A targeted questionnaire survey of one hundred and twenty-one (121) building and civil engineering contractors was employed to examine the interplay between two (2) key determinants of growth: building stable teamwork and implementing proper management systems. The analysis revealed six (6) crucial factors, three (3) within each category, that demonstrably drive contractor expansion in the Cape Coast Metropolis. These factors encompass fostering team cohesion through training, recognition, effective collaboration, strategic project differentiation, prioritising project management, and proactive risk mitigation. The study's findings underscore the critical importance of internal (teamwork) and external (management systems) factors in propelling SME contractor growth within this context. Equipping policymakers and stakeholders with this actionable knowledge will pave the way for targeted interventions and policy initiatives. These initiatives can empower building contractors with the necessary skills and support systems to overcome growth barriers, unlock their full potential, and contribute more significantly to the economic prosperity of Cape Coast Metropolis and beyond.

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INTRODUCTION

Small and medium-sized enterprise (SME) contractors control the majority of the construction industry, which is a key asset for reducing poverty, creating jobs, redistributing wealth, and enhancing the quality of life (Moo, 2015; Jaber et al., 2020; De Silva et al., 2023). SMEs, or small and medium-sized contractors (SMEs), are the foundation of the world economy. They quickly adjust to economic shocks, generating income and jobs despite massive corporations' employment losses and rapid demise.

Martínez et al. (2019) found that SMEs require a five-year growth time to attain their ideal size, mostly caused by the high business bankruptcy rate in the construction sector. This challenge has reportedly hindered the expansion of SMEs contractors, according to several academics, including, Ive & Murray (2013), Aigbavboa & Thwala (2014), Wang et al. (2021), and Dolatabadi & Budinská (2021). According to their resource holdings, construction enterprises are categorised globally like the life cycle and optimum size theories of company growth (Lavery, 2020). As per Act (2023), an organisation's expansion can be evaluated based on its outputs, which include sales, revenues, and profit, as well as its capital investment, asset value, market cap, and economic features that add value. Growth is defined as an organisation that, over a specified period, has experienced an increase in its financial class, employment profile, annual turnover, or value of work completed, or that employs people in a large geographic area (Levanon et al., 2015; Jansen et al., 2023.). According to Gupta et al. (2013) and Sahiti (2019), a firm's growth is typified by unpredictable characteristics that are hard to forecast. This study aims to identify the key factors, within the categories of building stable teamwork and implementing proper management systems, that drive the growth of small and medium-sized building contractors in Cape Coast Metropolis, Ghana.

LITERATURE REVIEW

SME Contractors' Growth

The efficiency with which SME contractors advance from one growth stage to the next determines economic growth. However, this shift in development depends on the availability of finance, which is a significant barrier to the expansion of SMEs in developing nations (Zhou et al., 2023). Many infrastructure projects need to be improved deteriorated since financing construction projects is a major difficulty in developing nations, according to Oyedele (2013) and Xu et al. (2021). Abdullah et al. (2023) posit that inadequate cash is another factor in the building contractors' sluggish expansion. A company must strive for efficiency, profitability, and sound financial management to overcome market obstacles and expand to attain exceptional performance (Karlsson et al., 2014; Levanon et al., 2015; Loku & Loku, 2023). Financial categorisation is often used in the construction industry as a barometer for business growth (Todri & Papajorgji, 2023). According to Levanon et al. (2015) and Saukkonen (2018), growth in an organisation is defined as an increase over a specific period in the financial class, employment profile, quantity of jobs attracted, yearly revenue, the value of work performed, or several positions over a geographical space. According to several studies (Osei, 2013; Xie et al., 2019), delays in work payments have impeded contractors' ability to expand. Management and owners of SMEs have restricted access to financial backing, developing technologies, and market data, according to Sclip (2021) and Lin et al. (2023). It is also challenging to implement strategic plans for the expansion of SMEs when owner-managers lack managerial competence (Wu & Wang, 2023; Makkawi, 2023). Anton (2013) pointed out that SMEs need more resources to compete with larger companies for skilled labour and need more resources to sustain positive customer relations (Amoateng et al., 2014; Go et al., 2021). The majority of contractors' restricted resources are accounted for by delays in project payments, which has also contributed to their sluggish growth (Osei, 2013; Xie et al., 2019b; Chadee et al., 2023). Payment delays could be linked to politically influential government-sponsored initiatives. The politicisation of government contracts and political cronyism in government procurement impedes small- and medium-sized contractors' expansion (Ameyaw et al., 2017;

Akomah & Nani, 2018; Schoenmaekers & Yukins, 2023). Moo (2015) and Motta (2020) believed that the low educational attainment of contractors, high staff turnover, unprofessional behaviour of consultants by withholding payment for completed work, and inadequate management impeded the growth of small and medium-sized enterprise (SME) contractors. A company's growth is influenced by its location (Lee & Xu, 2020). It is vital to comprehend the elements influencing the expansion of small and medium-sized enterprises (SMEs) contractors to formulate policy guidelines that will enable them to make the much-needed economic impact (Moo, 2015).

SME Contractors in Ghana

Like in other developing countries, small and medium-sized enterprises (SMEs) control the construction sector in Ghana (Osei, 2013; Moo & Eyiah, 2020). However, their dominance has yet to give them the edge to compete in global markets. International enterprises make up just approximately 9% of the market in the construction industry of emerging nations (2020). Despite their small proportion, they complete more work than 91% of SME contractors. This situation has worsened due to an absence of government assistance in policies and subsidies (Osei, 2013; Aniekwu, 2013; Salazar-Pavón et al., 2019). According to Attah & Wada (2023), micro, small and medium-sized enterprises comprise a massive portion of Ghana's Gross Domestic Product (GDP) and are crucial to the country's economic growth, job creation, income stability, and fight against poverty. Mbawuni (2019) was of the view that financial classification is frequently used to gauge a company's growth in Ghana's construction sector. They reaffirmed that these classifications are based on a company's ability to hold resources, including financial, human, plant, and equipment resources. Chen et al. (2017) did point out that government projects need contractors to be registered and classified. According to Kim (2020), the workforce's technological prowess, risk tolerance, size, skill set, and resource base directly impact SMEs' performance and growth. Most small and medium-sized contractors (SMEs) in Ghana are typically founded by a single person who also serves as the manager. This person typically has little formal education and is responsible for making important decisions in a complicated business environment like the construction industry (Berko & Damoah, 2013; Moo & Eyiah, 2019). According to Pham & Nguyen (2017) and Nguyen et al. (2021), the growth of SME enterprises is influenced by an ownership structure of this kind.

Determinants of SME Contractors' Growth

According to Obeng et al. (2014), there are three distinct categories in which the causes of the expansion of SME contractors are grouped. This covers the firm's attributes to its entrepreneurial qualities and the business environment in which it functions. These entrepreneurial traits include the owner's strong drive to achieve high standards, their strong entrepreneurial attitude, their strong ambition to expand, their excellent internal concept development, and their great people capital. The drive and ambition of the owner as well as their attitude and behaviours determine the growth and expansion of SME contractors. A crucial component influencing motivation, according to Kottika et al. (2020), is the character attribute of an entrepreneur. Anwar et al. (2023) emphasised that an owner's readiness and capacity, together with their drive for growth, are important factors in entrepreneurial endeavours.

The development of stable teamwork factors and an acceptable management strategy were determined by consulting the literature. Fourteen (14) variables were derived from the development of stable cooperation, termed Building Stable Teamwork (BST). These variables intertwine with eighteen (18) variables under the factor Proper Management Systems (PMS) as shown in Tables 1 and 2. The variables for building stable teamwork (BST) are as follows: permanent team members (BST 1), established partnerships (BST 2), ongoing and planned teamwork (BST 3), team spirit initiatives (BST 4) collaborative work environment (BST 5) team member visibility (BST 6), new member motivation (BST 7), team member recognition (BST 8), regular team meetings (BST 9), consistent instructions (BST 10), feasible and favourable work environment (BST 11), collaboration among contractors (BST 12), innovative team members (BST 13) and new member training by competent personnel (BST 14). The variables for Proper

Management Systems (PMS) are as follows: well-managed projects (PMS 1), focus on exceptional performance (PMS 2), diverse project characteristics (PMS 3), performance improvement prioritisation (PMS 4), risk prediction (PMS 5), activity management systems (PMS 6), well-managed supply chains (PMS 7), human resource quality management (PMS 8), safety management systems (PMS 9), effective time management (PMS 10), reliable construction software (PMS 11), company performance monitoring (PMS 12), budget estimation and procurement tools (PMS 13), decision support systems (PMS 14), incentives for workers at all time (PMS 15), appropriate and fair budget estimate (PMS 16), effective management tools (PMS 17) and teamwork motivation (PMS 18). Both sets of clearly coded variables are crucial for the growth of building contractors in the Cape Coast Metropolis.

METHODOLOGY

Sampling and Survey: A survey method was chosen to gather data from a sizable group of participants (Zhou & De-Wit, 2009). We aimed to reach Cape Coast Metropolis's building and civil engineering contractors. A total of two hundred (200) questionnaires were distributed, considering potential dropouts. One hundred twenty-one (121) responses were received, representing a 60.5% response rate. This sample size meets the minimum requirements for factor analysis (Sarantakos, 2005).

Variables and Measurement: The study's variables were derived from established literature on factors influencing the growth of small and medium-sized contractors. Fourteen (14) variables define Building Stable Teamwork (BST), numbered BST-1 through BST-14 (Table 1). Similarly, eighteen (18) variables constitute Proper Management Systems (PMS), numbered PMS -1 through PMS -18 (Table 2). The survey questionnaire was administered to confirm the relevance of variables by experienced building and civil engineering contractors. The measurement of these variables followed the guidelines Tabachnick and Fidell (2007) outlined.

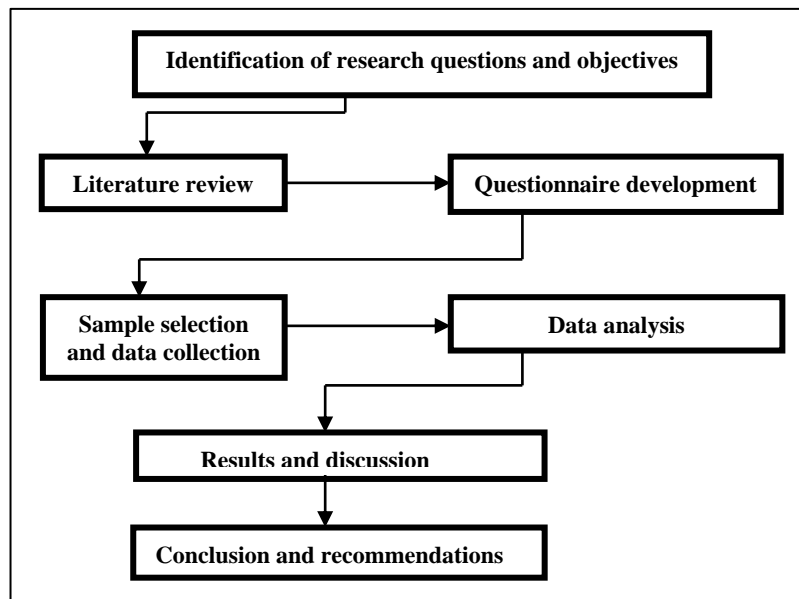


Fig. 1. Flow chart

Source: Zakari Mustapha et al., 2023

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For Data Analysis, the study conducted statistical analysis using the Statistical Package for Social Sciences (SPSS) software. Factor analysis was employed to identify underlying factors related to BST and PMS influencing contractor growth. Factor loadings exceeding 0.4 were considered significant (Sarantakos, 2005). Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity tests were performed to assess the suitability of the data for factor analysis. Eigenvalues were used to determine the significance of each variable, and a rotational component matrix categorised the components with the most significant effects. Figure 1 shows the flow chart adopted for the study.

FINDINGS AND DISCUSSION

The results revealed that men made up 78% of the respondents and the remaining 22% were women. Figure 2 shows that most responders held a bachelor's degree (60%), followed by respondents with higher national diploma (30%). doctorate and master's degree holders who worked for private companies with a background in building technology were extremely rare and represented only (5%) respectively. Figure 3 shows the distribution of the occupation of the respondents: Engineers (45%), quantity surveyors (25%), and supervisors (16%).

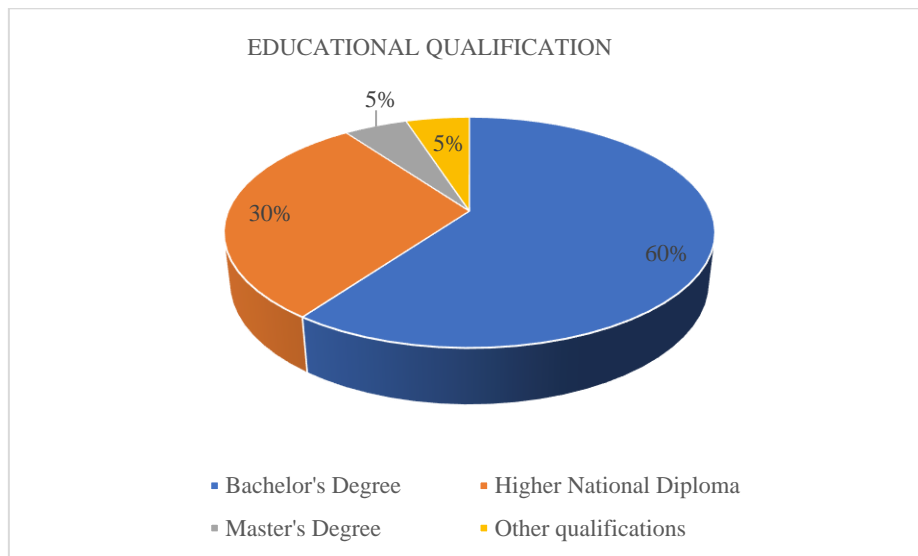


Fig. 2. Educational qualification

Source: Zakari Mustapha et al., 2023

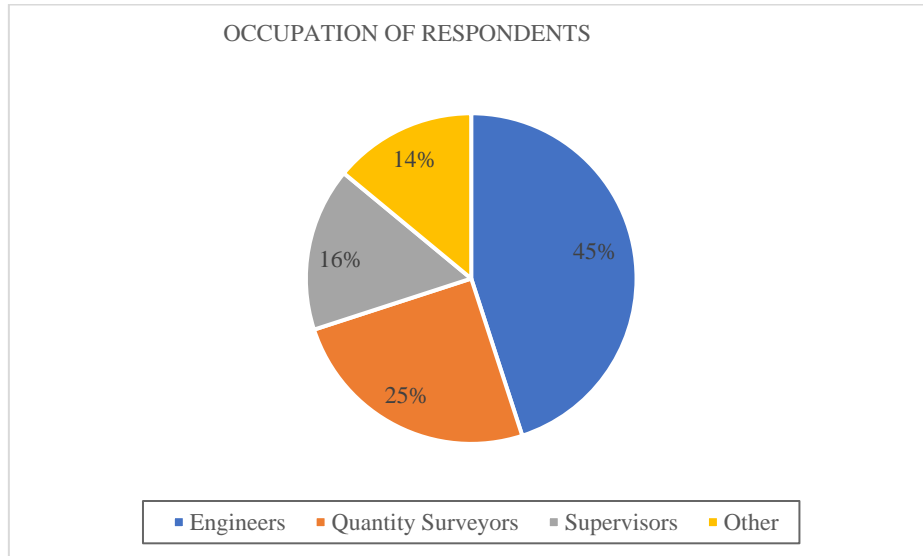


Fig. 3. Demographic data of respondents

Source: Zakari Mustapha et al., 2023

The recorded mean and standard deviation, ranges from 3.91 to 4.31 and 0.805 to 1.036 respectively, are displayed in Table 1. Out of the fourteen (14) criteria for building stable teamwork, Building Stable Teamwork 8 (BST 8) was ranked first with a mean score of 4.04 and a standard deviation of 1.036. Building Stable Teamwork 4 (BST 4) was the next important element among the fourteen (14) variables and was ranked second with a mean of 4.01 and a standard deviation of 0.987. Out of the fourteen (14) variables, Building Stable Teamwork 12 (BST 12) (collaboration among contractors) was the least-ranked variable with a mean score of 4.21 and the lowest standard deviation 0.805.

Table 1. Building Stable Teamwork

Variables for Building Stable Teamwork	M	SD	N	R
BST 1	3.91	0.940	121	6
BST 2	4.10	0.870	121	10
BST 3	4.04	0.898	121	9
BST 4	4.01	0.987	121	2
BST 5	4.10	0.926	121	7
BST 6	4.10	0.851	121	11
BST 7	4.07	0.964	121	5
BST 8	4.04	1.036	121	1
BST 9	3.95	0.982	121	3
BST 10	4.03	0.846	121	12
BST 11	4.07	0.834	121	13
BST 12	4.21	0.805	121	14
BST 13	4.31	0.913	121	8
BST 14	4.21	0.968	121	4

Mean (M); Standard Deviation (SD); Number of Occurrence (N); Ranking (R)

Source: Zakari Mustapha et al., 2023.

The recorded mean and standard deviation ranges from 4.16 to 4.34 and 0.700 to 0.892 respectively are displayed in Table 2. Out of the eighteen (18) criteria for proper management systems, (PMS 12) was ranked first with a mean score of 4.23 and a standard deviation of 0.892. (PMS 13) was the next important element among the eighteen (18) variables and was ranked second with a mean score of 4.17 and a standard deviation of 0.873. Out of the eighteen (18) variables, PSMS 16 (appropriate and fair budget estimation) was the least-ranked variable with a mean score of (4.29) and the lowest standard deviation (0.700).

Table 2. Proper Management Systems (PMS)

Variables for Proper Management System	M	SD	N	R
PMS 1	4.16	0.806	121	9
PMS 2	4.29	0.758	121	14
PMS 3	4.31	0.805	121	10
PMS 4	4.25	0.839	121	5
PMS 5	4.32	0.721	121	16
PMS 6	4.23	0.793	121	12
PMS 7	4.24	0.827	121	6
PMS 8	4.23	0.804	121	11
PMS 9	4.25	0.788	121	13
PMS 10	4.34	0.748	121	15
PMS 11	4.23	0.814	121	8
PMS 12	4.23	0.892	121	1
PMS 13	4.17	0.873	121	2
PMS 14	4.14	0.850	121	4
PMS 15	4.17	0.823	121	7
PMS 16	4.29	0.700	121	17
PMS 17	4.25	0.788	121	13
PMS 18	4.22	0.861	121	3

Mean (M); Standard Deviation (SD); Number of Occurrence (N); Ranking (R)

Source: Zakari Mustapha et al., 2023.

Establishing A Solid Collaboration that Supports the Expansion of Contractors

Table 3 illustrates that the component that promotes stable collaboration is appropriate for the growth of building contractors since the measure of sampling adequacy's $KMO = 0.894$'s (P-value) is higher than the 0.05 significant level. It was decided that Bartlett's test of sphericity was not valid at the 0.05 level of significance. Because the p-value is less than 0.05, the matrix of correlation is not a matrix of identity.

Table 3. Kaiser-Meyer-Olkin and Bartlett's Test

KMO of Adequacy Sampling	Approx. Chi-Square	0.894 1118.590
Bartlett's Test of Sphericity (BTS)	Df	91
	Sig.	0.000

Table 4 identifies fourteen variables under Building Stable Teamwork (BST) that facilitate the growth of building contractors; three of these variables have Eigenvalues greater than one. These factors account

for the differences in the increase in construction contractors in the following ratios: 1.369, 1.040, and 7.397. When taken as a whole, these variables explain 100,000 of the variation and demonstrate their significance for building contractors' growth.

Table 4. Eigenvalues for Building Stable Teamwork (BST)

Component for Building Stable Teamwork	Eigenvalues at first		
	Total	Percent Variance	Total Percent
BST 1	7.397	52.836	52.836
BST 2	1.369	9.780	62.616
BST 3	1.040	7.426	70.042
BST 4	0.928	6.631	76.673
BST 5	0.591	4.221	80.893
BST 6	0.468	3.342	84.236
BST 7	0.420	3.002	87.237
BST 8	0.400	2.854	90.091
BST 9	0.312	2.231	92.323
BST 10	0.291	2.077	94.399
BST 11	0.247	1.762	96.161
BST 12	0.210	1.500	97.661
BST 13	0.169	1.204	98.865
BST 14	0.159	1.135	100.000

Source: Zakari Mustapha et al., 2023

Because of their strength, none of the variables were eliminated after six (6) iterations. Stronger factor loadings were seen for all three (3) variables (components 1, 2, and 3), ranging from 0.532 to 0.864, exceeding the minimum threshold of 0.40. Factor loadings for Component 1 and Component 2 ranged from 0.532 to 0.914 and 0.597 to 0.864, respectively. The factor loadings of component three varied from 0.598 to 0.827. The development of building contractors is influenced by every factor within creating solid teamwork. The most important factors are the training provided to team members operating in a comparable environment, the recognition of team members' efforts for development by management, and the team building activities themselves. For Extraction Method, the study uses Principal Component Analysis. Rotation Method uses Varimax with Kaiser Normalization. The rotation converged over six iterations.

Table 5. Rotating component matrix for Building Stable Teamwork (BST)

Building Stable Teamwork (BST)	Communities		Component Matrix Rotation		
			Component		
	Initial	Extraction	1	2	3
BST 1	1.000	0.805		0.864	
BST 2	1.000	0.766		0.738	
BST 3	1.000	0.718		0.727	
BST 4	1.000	0.715		0.597	
BST 5	1.000	0.678			0.690
BST 6	1.000	0.77			0.827
BST 7	1.000	0.781			0.732
BST 8	1.000	0.707			0.598
BST 9	1.000	0.629	0.532		
BST 10	1.000	0.468	0.559		
BST 11	1.000	0.676	0.725		
BST 12	1.000	0.855	0.914		

BST 13	1.000	0.743	0.793	
BST 14	1.000	0.805		0.864

Source: Zakari Mustapha et al., 2023

Systems of Management That Are Appropriate and Support the Expansion of Contractors

Table 6 shows the sample adequacy measure's probability value, $KMO = 0.884$, is greater than the 0.05 significant threshold. This indicates that the components of suitable management systems are adequate to support the expansion of building contractors. At the 0.05 level of significance, the validity of the Bartlett's test of sphericity was determined to be invalid. Because the p-value is less than 0.05, the correlation matrix is not an identity matrix.

Table 6. KMO and Bartlett's Test

KMO Measure of Sampling Adequacy	Approx. Chi-Square	0.884 1036.601
Bartlett's Sphericity Test	Df	153
	Sig.	0.000

Table 7 shows the eighteen (18) variables for Proper Management Systems (PMS) parameters that affect building contractors' growth; three (3) of these variables have eigenvalues greater than one (1). These factors could account for 7.615, 1.505, and 1.150 of the differences in construction contractor growth. When taken as a whole, these variables explain 100,000 of the variation and demonstrate their significance for the expansion of building contractors.

Table 7. Eigenvalues for Proper Management System (PMS)

Component for Building Stable Teamwork	First Eigenvalues		
	Total	Percent Variance	Total Percent
PMS 1	7.615	42.303	42.303
PMS 2	1.505	8.360	50.663
PMS 3	1.150	6.389	57.052
PMS 4	0.981	5.449	62.500
PMS 5	0.871	4.838	67.338
PMS 6	0.781	4.341	71.679
PMS 7	0.733	4.072	75.751
PMS 8	0.688	3.822	79.573
PMS 9	0.569	3.159	82.732
PMS 10	0.503	2.797	85.529
PMS 11	0.486	2.702	88.231
PMS 12	0.423	2.348	90.579
PMS 13	0.376	2.089	92.668
PMS 14	0.354	1.967	94.635
PMS 15	0.324	1.802	96.437
PMS 16	0.251	1.396	97.833
PMS 17	0.225	1.249	99.082
PMS 18	0.165	0.918	100.000

Source: Zakari Mustapha et al., 2023

Due to the strength of the variables, none of them was eliminated after six iterations. For the variables under investigation (components 1, 2, and 3), higher loads of factors were reported, ranging from 0.533 to 0.825, surpassing the minimum threshold of 0.40. Factor loadings for component 1 ranged from 0.533 to 0.722, and for component 2, they ranged from 0.636 to 0.825. On the other hand, the factor loadings of component 3 ranged from 0.518 to 0.762. The information shows that every factor under proper management systems (PMS) affects the expansion of building contractors. The most important factors are that projects need to differ in terms of size and characteristics, that project management techniques need to be prioritised, and that appropriate management systems need to be in place to foresee or predict risks. For Extraction Method, the study uses Principal Component Analysis. Rotation Method uses Varimax with Kaiser Normalization. The rotation converged over six iterations.

Table 8. Rotated component matrix for Proper Management System (PMS)

Proper Management System (PMS)	Communities		Component Matrix Rotation		
			Component		
	Initial	Extraction	1	2	3
PMS 1	1.000	0.448	0.563		
PMS 2	1.000	0.601	0.533		0.518
PMS 3	1.000	0.712			0.724
PMS 4	1.000	0.607			0.762
PMS 5	1.000	0.549		0.636	
PMS 6	1.000	0.749		0.825	
PMS 7	1.000	0.764		0.808	
PMS 8	1.000	0.586		0.655	
PMS 9	1.000	0.529	0.581		
PMS 10	1.000	0.529	0.647		
PMS 11	1.000	0.531	0.684		
PMS 12	1.000	0.598	0.706		
PMS 13	1.000	0.606	0.639		
PMS 14	1.000	0.534	0.704		
PMS 15	1.000	0.604	0.722		
PMS 16	1.000	0.447	0.559		
PMS 17	1.000	0.374			
PMS 18	1.000	0.502		0.679	

Source: Zakari Mustapha et al., 2023

SUMMARY OF FINDINGS

This study investigated the factors influencing the growth of Small and Medium-sized Enterprise (SME) contractors in Cape Coast Metropolis, Ghana. Findings indicate that Building Stable Teamwork (BST) and Proper Management Systems (PMS) were significantly associated with contractor growth. Analysis revealed that three key BST factors contribute most to growth: training for team members in similar environments, recognition of team members' efforts by management, and effective team-building activities. Conversely, acknowledging and appreciating team members' work was found to have the least impact. These findings align with previous research highlighting the importance of team cohesion, motivation, and development in SME success (Todri & Papajorgji, 2023). Similarly, three crucial PMS factors emerged as main growth drivers: project differentiation in size and characteristics, prioritising project management systems, and implementing effective risk prediction systems. These echo prior studies emphasising the significance of project complexity, strategic management, and proactive risk mitigation for SME growth (Levanon et al., 2015; Saukkonen, 2018). Overall, the study sheds light on the importance of internal

(teamwork) and external (management systems) factors in SME contractor growth within the Cape Coast Metropolis context. These findings can inform targeted interventions and policy initiatives to equip local contractors with the necessary skills and support systems to overcome growth barriers and contribute more effectively to the city's economic development.

CONCLUSION AND RECOMMENDATIONS

In conclusion, this study identifies building stable teamwork and implementing proper management systems as crucial drivers of SME contractor growth in Cape Coast Metropolis. Fostering team cohesion through training, recognition, and effective activities, strategic project differentiation, prioritising project management, and proactive risk mitigation are key areas for intervention. By equipping contractors with these skills and support systems through targeted initiatives and policies, we can unlock their potential to overcome growth barriers and contribute meaningfully to the city's economic development.

Further Studies

Beyond these two (2) main components, more investigation is needed to determine the extent of deficiencies in additional aspects and their variations for the building construction business in Ghana to flourish effectively.

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CONFLICT OF INTEREST STATEMENT

The authors agree that this research was conducted without any self-benefit commercial or financial conflicts and declare the absence of conflicting interests with the funders.

AUTHORS' CONTRIBUTIONS

Zakari Mustapha conceptualised the central research idea wrote and provided the theoretical framework. Benjamin Boahene Akomah designed and supervised the research progress; Benjamin Boahene Akomah and Chris Kurbom Tieru anchored the review, made revisions, and approved the article submission. Chris Kurbom Tieru completed the final review and editing for the article submission.

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