

# EXPLORING THE CRITICAL SUCCESS FACTORS OF THE BUILT ENVIRONMENT CONSULTING FIRMS IN GHANA

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## Abstract

The construction industry is constantly revolving as a result of technological reservations, budgets and growth processes. What contributes to the success of consulting firms within the industry is a major concern due to the performance of Ghanaian consulting firms. A number of studies have been conducted to examine the critical success factors (CSFs) of built environment consulting firms. However, within the Ghanaian context these is a huge gap in this field. The purpose of the study was to explore CSFs pertinent to the Ghanaian construction industry. The study employed both the snowball and convenience sampling approach to identify a total number of thirty (30) consulting firms in Ghana. Consequently, data was retrieved and analyzed using; mean score ranking (index), One-Sample Wilcoxon Signed Rank Test and factor analysis. Thirty (30) factors were identified and rated on the degree to which the CSFs impact the success of their firms. The most four CSF's identified include; Client Satisfaction, Clear Goals and Objectives, Retaining Key Employees and Use of Development Tools. The factor analysis further revealed four underlying clusters labelled as; Human capital and development, Business structure and organization, Project management skills and Partnerships and Management support. Key contribution of the study is the identification of CSFs relevant to the Ghanaian economy which would enhance the

performance the of built environment consulting firms within the region.

**Keywords:** Critical Success Factors (CSFs), Built Environment, Consulting Firms, Ghana

## Introduction

A vibrant construction industry in a developing country, that mobilizes human and local material resources in the development and maintenance of physical infrastructure, is an impetus for increased employment and accelerated economic growth (Anaman and Osei-Amponsah, 2007). The construction sector is known to be a vital part of socio-economic development and to encourage its growth, countries need to ensure good quality living of its citizens by creating modern built structures (Laryea et al., 2012). From provision of distinctive solutions to delivery of advice, and tailor made answers to client's needs (United Nations Conference on Trade and Development, 2002), consultants play key role in the construction industry. Bhusan (2010) explained that clients are not equipped to locate, as well as define clearly the difficulties they faced and since in most cases they are also unqualified to solve them, there is a need for consultants. The significance of consulting services as relates to economic growth cannot be overemphasized (United Nations Conference on Trade and Development, 2002).

The consulting industry is noted to be constantly evolving (Hartz, 2002; Buono, 2004). This is exacerbated by the fact that a substantial amount of developing countries do not have a large amount of consulting firms. Consequently, developing countries need to develop this capacity whilst, simultaneously ensuring the success of the existing ones. What's more, Kipping and Clark (2012) emphasis on the dynamic nature of consulting services, stressing the fact that methods that were previously seen as adequate became inadequate with time and noted the conflicts which resulted with the entry of new firms into the consulting industry. Dansoh (2005) avers that the construction environment in Ghana is frequently changing. He explicated this as a result of the competitive nature of the market, lack of government continuity and challenging economic conditions. These variables mean that consulting firms within this region need to develop the resilience to withstand or recover irrespective of the negative changes; when they occur. The need for consulting firms to adopt certain factors to enhance and sustain success rate is imperative. The aim of this research is to identify the critical success factors employed by consulting firms of the built environment in Ghana. Identification of critical success factors would contribute to closing the gap between literature and practice in the field of built environment consulting; rationally, organizations would focus their limited resource on the things which really make the difference between success and failure.

## Success Factors

Success is explained as achieving outcomes that exceed that which was expected in terms of cost, schedule, safety, quality and personal fulfilment (Ashley, 1987; Sandivo et al., 1992). Prior to this, Rockart (1979) termed critical success factors (CSFs) as the limited number of key areas which if executed properly would increase organizational performance. Also, if done right, it would cause the organization to flourish but if the reverse is the case, a negative result would be observed. Leidecker et al. (1984)

define CSFs as a few things that must go right for the business to flourish. Through CSF methodology, key areas that are essential for management success are made explicit (Boynton and Zmud, 1984). CSFs may also be used by managers as descriptions, predictors, and guidelines for achievement levels. CSFs have been used as a management measure since the 1970s in so many different disciplines such as financial services (Boynton and Zmud, 1984) information systems, manufacturing industry, (Mohr and Spekman, 1994) project management, (Baker et al., 1988, Pinto and Selvin, 1988, Davies, 2002) quality management, (Seetharaman et al., 2006) supply chain management, (Kim et al., 2008) etc. Ultimately, decisions of managers should be more effective because the critical success factors are founded on data categorical to the success factors of the organization (Caralli et al., 2004). Rothberg (2012) avers that, critical success factors serve as a roadmap for senior leadership to pilot operations, and without these, management will control the company with difficulty; because priorities change with every uncertain new development.

From the 1990s, a large amount of research has been conducted in an attempt to identify factors contributing to the success of firms. A number of studies have also explored the success factors of consulting firms. The section below reviews these success factors. Literature identifies support from top management as one of the critical success factors over the years. Ang et al. (1995) established this support from top management as the second most important CSF in a study of implementations in Singapore. Willcocks and Sykes (2000) agree that project championship is a critical enabling factor if a company or firm stands the chance of succeeding in the economy. McKersie, and Walton, (1991) opines that one advantage of positioning a champion of a particular project type, high in the organization is associated with the authority to move large and complicated projects through a transition. In the opinion of Slevin and Pinto (1986), it is important to set the goals of the project before even seeking top management support

Another critical factor proffered to affect the success of a firm in literature is the use of training sessions and educating the employees of the firm. A firm that has a steering committee goes a long way to affect the firm's success critically. Seetharaman et al. (2006) expounds that a project management structure with a committee consisting of senior management from across different corporate functions, project management representatives, and end users or customers who are in contact daily, is an effective means of ensuring appropriate involvement and realizing project goals. Subcontracting or partnering with other consultants has contributed immensely to firm's success. Piturro (1999) averred that consultants may have experience in specific industries, comprehensive knowledge about certain modules, and may be better able to determine which suite will work best for a given company. Managers and business directors, in this case directors of firms must also be keen on managing the expectations of projects, employees and output. Marion (1999) comments that careful deliberation of success measurement as well as the management of expectations of firms' projects by the manager (who is in charge of implementation of goals) are important factors. Furthermore, Hoffer et al. (1998) affirms that management of expectations has an impact through all the stages of the implementation life cycle and that these expectations must be feasible

A study by Somers and Nelson (2001) reveal that when firms minimize customization of designs, thus employing prototyping, the firm is more productive, hence success is achieved. They further went on to say that, because customizations are usually associated with increased information systems costs, longer implementation time, and the inability to benefit from vendor software maintenance and upgrades, customization should only be requested when essential. Business process reengineering is also acknowledged as a critical success factor in literature. Hammer and Champy (1993) believe that to achieve the greatest benefits provided by a system, it is imperative that the business processes are aligned with the firm's system. Business process

reengineering is also acknowledged as a critical success factor in literature. Somers and Nelson (2001) explain that business process reengineering involves the firm's ability and implementation of new, appropriate and effective business procedures that will take the firm to a new level in its success. In addition, Hammer, and Champy (1993) believe that to achieve the greatest benefits provided by a system, it is imperative that the business processes are aligned with the firm's system.

Robinson and Dilts (1999) asserts that dedicated resources are critical to the realization of the benefits associated with an adopted package or software. Reel (1999) however states that resource requirements need to be determined early in the project but often, firms exceed initial estimates and the inability to secure resource commitments up front may doom project efforts. It is estimated that half of the implementations of companies fail to achieve expected benefits because they "significantly underestimate the efforts involved in change management" (Appleton, 1997). This explains why effective change management is identified as a critical success factor in companies and firms worldwide. Firms usually have departments and literature recommends that there is communication in between such departments. Schwalbe (2000) states that communication is the oil that keeps everything working properly. Slevin and Pinto (1986) explains that communication is essential within the project team, between the team and the rest of the organization, and with the client. Ang et al. (1995) however mentions that interdepartmental communication represents a critical success factor. Through the literature review, a total of 22 factors were uncovered to be success factors pertinent to the consulting firms of the built environment.

## Research Methodology

This study adopted the quantitative approach to gather factual data on identifying the CSFs that the consulting firms of the built environment employ. The population of the study were Managers and Directors of the construction consulting firms that have been operating for a minimum of ten (10) years. The study area and difficulty in accessing a population size for the targeted research area, motivated the use of the Snowball and Convenience sampling. Convenience sampling was adopted by virtue of the difficulty in getting response from managers and directors in the Ghanaian consulting industry and failure of some of them to respond in time as evident in the study undertaken by Addy et al. (2014). All the survey questionnaires were administered in person by the researchers and collected after respondents filled them whilst others were collected later. The identification of critical success factors was largely aided by the information acquired from the literature review. Informal interviews with two built environment consulting firms led to the identification of eight (8) additional success factors. The success factors (30 in total: 22 from literature review and 8 from 2 successful firms) were further put to a test through the survey carried out, to determine if these factors were accepted to be indeed critical.

Target respondents were briefed regarding the purpose of the survey and reassured that the information they provided will be kept confidential and solely for research purposes. Respondents from consulting firms of the built environment were asked to identify these variables from a range; of 1- Not Important, 2- Slightly Important, 3- Moderately Important, 4-Important and 5-Very Important. The data collected was analyzed using the mean score, the one-sample Wilcoxon signed rank test and Factor Analysis. A total of seventy (70) questionnaires were distributed. However, 30 were retrieved, implying a response rate of 42.86%. The response rate is so, because of time restraints and the inability of some respondents to fill the questionnaires due to pressing work schedules.

## Data Analysis and Results

### Demographic Data

The demographic data showed that close to 50% of the respondents worked in general building consultancy with about 20% working within the quantity surveying field. The results are displayed in Table 1. The table also shows that all the firms have been in existence for more than 10 years as this was part of the criteria used in selecting the respondents. Eighty percent of the respondents indicated they had been practicing for more than fifteen years. The results give indications that the respondents' firms have reasonable experience. Twenty of the respondents out of the thirty indicated that their clients base is made up of both private and public sector clients.

Three main analysis were subsequently performed on the collated data. They include the mean score ranking, the one-sample Wilcoxon signed rank test and exploratory factor analysis. The one-sample Wilcoxon signed rank test is a non-parametric alternative to one-sample t-test when the data cannot be assumed to be normally distributed. According to Hair et al. (1998) when the sample size is more than 30, the central limit theorem shows that a normal distribution can be assumed. Field (2005) also argues that with a sample size of more than 50, the sampling distribution will almost always approach normal distribution. Albeit, considering the size of the sampling frame the data was assumed to be non-parametric. Non-parametric tests often evaluate medians rather than means, and therefore if the data have one or two outliers, the outcome of the analysis is not affected. The mean score ranking enabled in the establishment of the relative importance of the variables whilst the Wilcoxon signed rank test afforded to check the hypothesis of the importance of the value. The mean scores of each identified factor has been tabulated to aid in providing a better appreciation of the results.

**Table 1. Demographic Data**

Variable	Frequency	Percentage
<b>Firm Specialty</b>		
General Building Consultancy	14	46.7
Architectural Consultancy	4	13.3
Civil/Structural Engineering Consultancy	3	10
Quantity Surveying Consultancy	7	23.3
Others	2	6.7
<b>Existence of respondent's firm</b>		
10 years to 15 years	6	20
15 to 20 years	15	50
Over 20 years	9	30
<b>Client type</b>		
Private individuals	4	13.3
Public entities	4	13.3
Both	22	73.4

## Rating of Success Factors

The mean ratings along with their respective rankings of the 30 success factors are summarized in Table 2. Given that the rating scale adopted ascribed higher ratings of 4 and 5 to important and very important attributes, a success factor with a mean rating of more than or equal to 3.5 is recognized as a CSF. When two or more factors have the same mean scores, the one that has a lower standard deviation is deemed to be more important (Field, 2005). As shown in Table 2, 21 success factors received a mean rating of 3.5 or above and they are considered as the CSFs. The first six CSF's include client satisfaction ( $m = 4.34$ ;  $s.d.=0.77$ ), clear goals and objectives ( $m = 4.21$ ;  $s.d. =0.86$ ), retaining key employees ( $m= 4.14$ ;  $s.d. =0.80$ ), use of development tool ( $m =4.07$ ;  $s.d. =0.83$ ), retaining knowledge and institutionalizing best practices ( $m =4.03$ ;  $s.d. =0.96$ ) and effective project management ( $m =4.00$ ;  $s.d. =0.86$ ). It is worthy to point out that all these factors had a mean score of 4.0 or above showing that they are very critical within the industry. Majority of the identified CSFs are considered more specific to the firm level than to the project level. To be successful in Ghana, consulting firms should strengthen their firm structures.

From the Table 2, the most important factor is

client satisfaction. This generally concur with what extant literature proffers (Torbica and Stroh, 2001; Anderson et al., 1994). Studies corroborate that this factor is a key performance indicator on construction projects (Rankin et al., 2008; Skibniewski and Ghosh 2009).

**Table 2. Results of Mean Score and Wilcoxon Signed Rank Test of Success Factors**

	SUCCESS FACTORS	Mean	Std. Deviation	Rank	Sig
1	Client Satisfaction	4.3448	.76885	1	0.000
2	Clear Goals and Objectives	4.2069	.86103	2	0.000
3	Retaining Key Employees	4.1429	.80343	3	0.001
4	Use of Development Tool	4.0667	.82768	4	0.002
5	Retaining Knowledge & Institutionalizing Best Practices	4.0333	.96431	5	0.008
6	Effective Project Management	4.0000	.86066	6	0.008
7	Top Management Support	3.9667	.96431	7	0.140
8	Project Team Competence	3.9643	.83808	8	0.010
9	Enhancing Skills of Employees	3.9333	.86834	9	0.160
10	Interdepartmental Communication	3.9333	.82768	9	0.007
11	Interdepartmental Cooperation	3.9000	1.06188	11	0.050
12	Risk Addressing, Assessing & Management	3.9000	1.12495	11	0.450
13	Tracking and Managing Financial Drivers	3.8667	.86037	13	0.026
14	Management of Project Expectations	3.7241	.99630	14	0.136
15	Brand Differentiation	3.7000	.98786	15	0.127
16	Personal Relationship-Based Marketing	3.6333	.76489	16	4.310
17	Partnering with Other Consultants	3.6333	.88992	16	0.411
18	Assigning Project Champions	3.6296	.74152	18	0.413
19	Client Involvement	3.6000	1.00344	19	0.557
20	Selection of Appropriate Software	3.5862	1.08619	20	0.607
21	Dedicated Resources	3.5862	1.01831	20	0.391
22	Prior Experience in Business	3.4444	1.25064	22	0.922
23	Change Management	3.3448	1.04457	23	0.475
24	Business Process Reengineering	3.2000	.99655	24	0.152
25	Education on New Business Process	3.1667	.87428	25	0.096
27	Political Affiliation	3.1379	1.02554	27	0.128
28	Governmental Support	3.1333	1.38298	28	0.228
30	Minimizing Customization	2.6667	1.02833	30	0.000

It is averred that satisfied customers are the backbone of the construction industry (Torbica and Stroh, 2001). Conventional wisdom shows that your ability to satisfy your client is your ability to remain in business. In Ghana, the situation is not different. The client determines the pace of the work and is the initiator of jobs. Satisfying your client will mean continuity on other jobs or recommendation to carry out further works. It should be noted that in many developing countries, the concept of viewing customer satisfaction has only recently started receiving recognition (Keivani and Werna, 2001). Ahadzie et al. (2008) argued out that in most developing countries for the most

part, the built industry was government controlled in the sense that, Government was responsible for the direct supply of houses. However, with the emergence of private property holders and other private sector clients the creation of a competitive environment has contributed to promoting the satisfaction of customers. To be successful in the consulting built environment, the satisfaction of the client is paramount. The factor "Clear Goals and Objectives" was rated second. The respondents hence agree the pivotal role that setting of goals and objectives holds. Ang et al. (1995) stated that clear goals and objectives were the third most critical success factor in terms of project implementations. It is imperative that clear goals and objectives are set for each particular project to ensure the success of the firm. This notion shows that project success translates into firm success.

Managers are responsible for crafting a work environment in which employees feel motivated, cared about, and rewarded. It is not surprising that "Retaining Key Employees" was ranked third. Van and Garlick (2008) agree that success in most firms have been largely linked to key employees being retained within the firms. This is quite understandable especially in Ghana where high mobility of construction employees is a major occurrence (Fugar et al., 2013). The threat of itinerant employees affects consulting firms in cultivating the culture of developing and retaining employees. Respondents agree that handling this threat will contribute to success within the organization. They also buttress this with the fact that, if knowledge is maintained and improved upon, as well as institutionalizing the best practices there would be positive results.

It is important to draw attention to some factors that were not considered as critical within the Ghanaian industry. Governmental support was found out not to be a critical success factor. This is very surprising as other studies focused in developing countries argue out the importance of governmental support to built environment consulting firms (Yusuf, 1995). One reason that could be alluded could be

that at present governmental structures or policies to promote Ghanaian built consulting firms is lacking. As such most of these firms have realised that waiting on government support may cause you to lack behind. This does not nullify the fact that the respondent agree that is a success factor howbeit not critical in succeeding in the Ghanaian built environment. It should be borne in mind that there are some temporal factors that may influence the success of a firm. Consequently, this variable may change depending on regulatory structures and polices that may promote the success of consulting firms. Currently, governmental support cannot be considered a critical success factor.

### One-Sample Wilcoxon Signed Rank Test

The identified variables were further subjected to hypothesis testing. The testing posited the null hypothesis that these variables were not important. A summary of the test results is shown in Table 2. For each factor identified, the null hypothesis was that the factor was unimportant ( $H_0: = 0$ ) and the alternative hypothesis was that the attribute was important ( $H_a: > 0$ ), where  $0$  is the population median ( $0$  was fixed at 3.5). The significance level was placed at 95% in accordance with conventional risk levels. From the hypothesis test, fourteen variables had a significance of less than 0.005 indicating that the null hypothesis was rejected and that these factors were significance. Thus, out of the 21 identified critical success factors from the survey, seven of these variables were indicated as not important. These factors were; management of project expectations, brand differentiation, personal relationship-based marketing, assigning project champions, client involvement, selection of appropriate software and dedicated resources. Consequently, the identified critical success factors in the Ghanaian built consulting firms comprised of only fourteen factors.

### Results of Factor Analysis

An exploratory factor analysis was performed to detect the structure of relationships between the success factors. This analysis is useful in aiding to identify clusters of related variables making it ideal for reducing a large number of variables into more easily understood framework (Ukoha and Beamish, 1997). The Bartlett’s test of sphericity, a statistical test for the presence of correlations among the variables, is 208.373 and the associated significance level is 0.000 suggesting that the population correlation matrix is not an identity matrix. A Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to determine whether the data are adequate for the factor analysis technique to be employed. While an observation of 0.5 is generally considered acceptable, the 0.503 KMO means that the data passes the minimum requirement and as such, is adequate for factor analysis. The limitation of the sample size renders this research more of an exploratory type with the objective of establishing the clustering patterns.

Table 3. Communalities of Critical Success Factors

	Initial	Extraction
Client Satisfaction	1.000	.744
Clear Goals and Objectives	1.000	.789
Retaining Key Employees	1.000	.705
Use of Development Tool	1.000	.846
Retaining Knowledge & Institutionalizing Best Practices	1.000	.733
Effective Project Management	1.000	.763
Top Management Support	1.000	.738
Project Team Competence	1.000	.539
Enhancing Skills of Employees	1.000	.511
Interdepartmental Cooperation	1.000	.831
Interdepartmental Communication	1.000	.801
Risk Addressing, Assessing & Management	1.000	.760
Tracking and Managing Financial Drivers	1.000	.698
Partnering with Other Consultants	1.000	.787

Extraction Method: Principal Component Analysis.

Despite this, it is necessary to ensure that the sample size in this study would not adversely affect the result of classification as generated by the factor analysis as literatures indicated that small samples and low sample to variable ratio can lead to erroneous

conclusion (Lingard and Rowlinson, 2006). The accuracy of the factor analysis would depend on the strength of the data itself due to having only 30 valid data. In order to assess the strength of the data, the communality of each success factor would have to be examined. The communality represents the squared multiple correlation coefficient between a variable and all other variables in the analysis. In effect, it reveals the percentage of variance in a particular variable that is explained by the factor. Uniformly high communalities hardly occur in real data, with 0.4-0.7 being the common magnitude in social science research (Costello and Osborne, 2005). Table 3, shows that only two out of the critical success factors had a communality less than 0.7 but more than 0.4. The rest had a communality above 0.7 indicating that despite the relative small sample size an accurate clustering pattern can result.

Table 4. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.164	36.884	36.884	5.164	36.884	36.884	2.896	20.684	20.684
2	2.228	15.915	52.798	2.228	15.915	52.798	2.889	20.634	41.318
3	1.713	12.234	65.032	1.713	12.234	65.032	2.699	19.280	60.598
4	1.139	8.134	73.166	1.139	8.134	73.166	1.760	12.568	73.166
5	.956	6.826	79.991						
6	.771	5.504	85.496						
7	.640	4.575	90.070						
8	.541	3.861	93.932						
9	.331	2.365	96.297						
10	.186	1.325	97.622						
11	.149	1.064	98.687						
12	.093	.662	99.349						
13	.072	.513	99.862						
14	.019	.138	100.000						

Extraction Method: Principal Component Analysis.

Table 5. Rotated Component Matrix\*

	Component			
	1	2	3	4
Retaining Key Employees	.821			
Use of Development Tool	.537			
Retaining Knowledge & Institutionalizing Best Practices	.796			
Enhancing Skills of Employees	.651			
Interdepartmental Cooperation		.893		
Interdepartmental Communication		.777		
Risk Addressing, Assessing & Management		.790		
Tracking and Managing Financial Drivers		.619		
Client Satisfaction			.689	
Clear Goals and Objectives			.814	
Effective Project Management			.757	
Project Team Competence			.673	
Top Management Support				.708
Partnering with Other Consultants				.813

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

The data was subjected to principal component analysis (with varimax rotation) with the results summarized in Table 5. The eigenvalue and factor loading was set at conventional high values of 1.0 and 0.5 respectively (Dainty et al., 2003). Four components with eigen values greater than 1.0 were extracted using the factor loading of 0.50 as the cut-off point. The relatively high values of the loading factor (0.6 for more than four variables) lend support to the favourability of the sample size for the analysis. The total variance (see Table 4) explained by each component extracted is as follows component 1 (36.884%), component 2 (15.915%), component 3 (12.234%) and component 4 (8.134). The final statistics of the principal component analysis and the components extracted accounted for almost 73% of the total cumulative variance.

Based on the examination of the inherent relationships among the variable under each component the following interpretation was made component 1 was named *Human Capital & Development*; component 2 *Business Structure & Organization*; component 3 labelled *Project Management Skills* and component 4 *Partnerships & Management Support*. These names were mostly derived from the components using the variables with the highest loading factor.

## Discussion of results

### Component 1: Human Capital and Development

The extracted success factors for component 1 were; *Retaining Key Employees* (0.821), *Retaining Knowledge & Institutionalizing Best Practices* (0.796), *Enhancing Skills of Employees* (0.651) and *Use of Development Tool* (0.537). The respective factor loadings have been indicated in parenthesis. Human Capital and Development component accounted for 36.88% of the variation. Human capital is generally accepted as an invaluable asset to companies. It is averred that this constitutes an essential capability within firms and critical in determining an organization's success (Marimuthu et al. 2009). Fugar et al. (2013)

argued out the importance of human capital and its development within the Ghanaian construction industry. They emphasized the imperatives of human capital and why its investment is incontrovertibly linked to the success of the industry. It is not surprising that retaining key employees was rated third amongst the success factors. Fisher et al. (2003) emphasise that production technology, financing and marketing can all be copied by other competitors but the strategy that is harder to copy is the unique ways an organisation optimises its workforce through comprehensive human capital development towards the realisation of organisational goals, long term survival and sustainability. Obviously human capital and its development is deemed important for enhancing the success of consulting firms in the construction industry.

### Component 2: Business Structure & Organization

This component accounted for 15.915% of the variation. The respective factor loadings are *Interdepartmental Cooperation* (0.893), *Interdepartmental Communication* (0.777), *Risk Addressing, Assessing and Management* (0.790) and *Tracking and Managing Financial Drivers* (0.619). It is known that the business structure and its organization provide the requisite framework in which a business operates (Squire, 2006). Stefanou (1999) argued that a corporate culture that emphasizes the value of sharing common goals over individual pursuits and the value of trust between employees and managers is a key factor for a successful enterprise. For the various professionals working in their respective domain it is imperative that cooperation and involvement of all is encouraged. Weisheng et al. (2008) provide that though there is no standard organization structure for consulting firms, there are key elements in formulating an organization, which are the driving force for promoting a firm's competitiveness. From the study, one of these elements is communication across departments and interdepartmental cooperation. Poor communication between engineering team members and other

organizational members was found to be a problem in engineering consulting firms (Grover, 1995). The factor *Tracking and Managing Financial Drivers* represents providing financial measurement of the firm's performance and reiterates the importance of a requisite framework for a firm to operate and succeed within the region.

### Component 3: Project Management Skills

*Clear goals and objectives (0.814)*, *effective project management (0.757)*, *client satisfaction (0.689)*, *project team competence (0.673)* represents the component Project Management Skills. This cluster accounted for 12.234% of the variation. The past few years has seen project management highly identified and appreciated as very keen and somewhat indispensable in today's business world. Project managerial inefficiencies have consistently been a major problem confronting stakeholders in the Ghanaian Construction Industry. A plethora of reports point to this phenomenon (Edmonds and Miles, 1984; Ofori, 1989 and Konadu-Agyemang, 2001). Evidence from the study suggests that this component represents a key variable in contributing to the success of consulting firms in Ghana. One of the core principles of project management is being able to clearly define the objectives for a project which forms part of the project chart. Studies corroborate the importance of setting goals and objectives (see for example Ang et al., 1995 and Slevin and Pinto, 1986). It is not surprising that clear goals and objectives emerged as the most critical in this group.

### Component 4: Partnerships & Management Support

This cluster consisted of *Partnering with other consultants (0.813)* and *Top Management Support (0.708)*. This component accounted for 8.134% of the variation. Subcontracting or partnering with other consultants has contributed immensely to firm's

success. Piturro, (1999) opined that other consultants may have experience in specific industries, comprehensive knowledge about certain modules, and may be better able to determine which suite will work best for a given project. In Ghana, the relative size of firms and the existence of most professional specific consulting firms (i.e. architectural or quantity surveying firm) may not qualify them to bid for some projects. Consequently, to compete and succeed it is imperative that partnering with other firms takes place. Previous research has also established that senior management support is critical to the success of most firms (for example, Sumner, 2003; Brown and Vessey, 2003). According to Ginzberg (1981) top management support was instrumental in the successful implementation of a large customized system. Ang et al. (1995) established this support from top management is the second most important CSF in firms in Singapore.

### Conclusion

The study has unearthed critical success factors pertinent to the Ghanaian consulting built environment. The study also shows that the structure of a particular industry has influence on what is considered a success factor or otherwise. The results of the questionnaire survey has revealed the critical role clients' satisfaction and other thirteen factors play in contributing to success within an organization. It can be seen that environmental factors and economic stability have the influence that they exert on success factors within the organization. The determinants of success in built consulting firms in Ghana can be grouped into four main clusters; human capital and development, business structure and organization, project management skills and partnerships and management support. These findings lend support to the evidence that success on the project dovetails to success in the firms. The finding further demonstrate that the human capital is a firms' greatest asset. It is recommended that consulting firms focus on the development and retention of key employees within the organization.

Lastly, consulting firms must always strive to satisfy their clients and their prospective clients.

## Limitations

The research evidence should be viewed with certain amount of caution because of the study limitation. Primary amongst this research's limitation is the relative small sample size used in the study. Consequently, the study should be seen as an exploratory study which is to identify and detect the clusters amongst this identified factors. Generalizing the findings of the study will be problematic and this study calls for more studies in this direction with focus on a larger scale. However, this should not nullify the conclusions given that the necessary preliminary tests associated with the adequacy of the sample size proved favourable for the analysis to proceed. Convergence with the literature and the authors' experience provide some additional confidence in the findings. Further studies could explore the implementation of CSFs pertinent to the Ghanaian built environment.

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