Chapter 12
Unveiling the Causes of Business Failure in Ghana's Construction Industry: An Analytical Study

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Abstract This paper investigates the factors affecting the survival of construction businesses in Ghana, with recommendations for enhancing their continuous industry participation. The paper gauges contractors' and professionals' views on factors contributing to Ghana's construction business failure. It adopts a questionnaire survey distributed to contractors and industry professionals in Ghana. With an average response rate of eighty (80)%, the data was organised and analysed using mean scores of the identified variables. Paired samples T-test was also used to assess the significant difference between the two variables. Six common causes of business failure were identified: payment delays, excessive debt incurred, high charges on credit, working in unfamiliar localities, low profit margins and change in type/scope of work. It also emerged that the causes of business failure vary by the different financial classes of construction businesses operating in the industry. The study has practical, academic and policy implications for the survival and growth of construction businesses in Ghana. It is recommended that construction businesses should be strategic in selecting the type of work to undertake, the client group to work for, and the location to undertake projects. Government should expedite processes leading to establishing a Construction Industry Development Authority.

Keywords Business failure · Small and medium construction firms · Contractors · Construction industry · Ghana

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12.1   Introduction

Globally, the construction industry is often seen as a driver of economic growth. The industry can utilise local human and material resources to develop and maintain housing and infrastructure to promote employment and improve economic efficiency (International Labour Organization 2009; Erol and Unal 2015). The importance of the construction industry also stems from its strong linkages with other sectors of the economy. For example, energy, water and sanitation, banking, agriculture, ports and harbours, aviation, education, and manufacturing depend on some activities to flourish. In Ghana, the significant contribution of the construction industry is well documented (Owoo and Lambon-Quayefio 2018). Construction businesses, on their part, are the main channel through which the needed infrastructural facilities are provided. Despite such importance, construction business failures have been reported severally worldwide (cf. Jones 2019; Bal et al. 2013; Jagafa and Wood 2012; Mofokeng 2012; Strischek and McIntyre 2008). Failure is common in construction businesses, but their situation tends to be exacerbated due to the nature and characteristics of the construction industry. The immediate and ripple effects of construction business failure affect the whole economy (Abd-Hamid et al. 2015; Bal et al. 2013; Holt and Edwards 2012; Wong and Ng 2010; Tserng et al. 2011).

Sharma and Mahajan (1980) suggest that the extant literature should systematically study business failures and document evidence to enhance knowledge and reduce occurrences. In this regard, many models have been used to study the phenomenon (Onakoya and Olotu 2017). Among these, the Resource-based View (RBV) and the Organisation Ecology (EO) theories have been used extensively to explain the phenomenon of business failure (Arasti 2011). They are perfect lenses through which this study could be understood. Building on the arguments generated from these perspectives, other studies have emphasised the need to identify the factors leading to business failures to clarify the phenomena further and influence policy and industry responses (Assaad and El-adaway 2020). Given the significant economic contribution of the construction industry, some studies on construction business failure have been conducted to understand the phenomenon (cf. Holt 2013; Mahamid 2011; Osama 1997; Kivrak and Arsslan 2008). The lacuna found in these studies is that most tend to solicit only the views of construction firms seeking to identify the causes of failure. More so, whilst construction businesses can be placed under various categories depending on the type of work they undertake and, in some cases, their capacity, most studies lump them together as one group. There is also a need for more data on construction business failure in the Ghanaian context. This study is an attempt to bridge these gaps. It aims at identifying the common factors leading to construction business failures in Ghana. It also establishes whether there are differences in the category of a construction business and perceptions of factors leading to business failure. The remainder of the paper is structured as follows: concepts of business failure, resource-based view and organisation ecology theories, causes of business failure, research methods, results and discussions and finally, conclusions and recommendations.

12.2 The Concepts of Business Failure

The concept of business failure is viewed from different lenses throughout the literature. For instance, whereas Altman (1993) describes it in business insolvency, Richardson et al. (1994) deem it a shortage of money. Russell and Zhai (1996) describe it as termination in the business operations, whilst Appiah and Abor (2009) suggest it is a corporate failure. Ong et al. (2011) view it is about a business undergoing bankruptcy. Interestingly, a generic definition has been problematic such that (Cochran 1981) draws attention to the expanding and contracting nature of various definitions ranging from the dysfunctional broad to the acutely narrow. A popular view captured within the literature characterises failure as the cessation of involvement in a venture because it has not met and can no longer meet the minimum threshold for economic viability as stipulated by the entrepreneur (Ucbasaran et al. 2013). This definition explores failure from the entrepreneurship perspective, and as such, it is the entrepreneur's expectations of economic viability. In that context, Mbat and Eyo (2013) identified three types of business failure: low or negative returns, technically insolvent, and bankruptcy. According to them, low or negative returns would fail because there is no opportunity for expansion. Technically, insolvency refers to a business's inability to meet its liabilities as and when it is due. When the ratio of the total assets of the business and its liabilities is less than one for a given period, Mbat and Eyo (2013) explain that the business is said to be bankrupt.

Examination of various definitions revealed that most relate to the same significant event in the lives of businesses—the defining moment where it ceases to exist. It happens when the rate of return on invested capital is significantly and continually lower than what was invested. Cash flow is affected at a point the business needs to generate more profit, and financial obligations are challenging to meet. If this situation is not addressed, financial deterioration sets in and, eventually, business activities are disrupted. The final stage is when the business ceases to operate. To help place this paper into context, we adopt the above features to explain what we mean by construction business failure. By the term, we refer to entities that generally perform below the expected standard, compared with firms of similar capacities, for an extended period. The term also includes businesses that have ceased operating either for financially related reasons or willingly due to the owners failing to achieve their expectations.

12.2.1 Resource-Based View and Organisation Ecology Theories

The Resource-Based View (RBV) and Organisation Ecology (OE) theories have been used extensively in explaining business failure (cf. Godwin-Opara 2016; Amankwah-Amoah 2016; Barney and Hesterly 2012; Mellahi and Wilkinson 2004; Hannan and Freeman 1977). The arguments for the former centre on internal issues, and those

for the latter relate to external environmental issues. The RBV explains that performance and sustainability depend on the availability of owned and controlled resources (Barney and Hesterly 2012). The categories of resources include physical, financial, technological, human and organisational (Ahmad 2015). The central argument of the supporters of RBV is that the availability of resources and capabilities provides the business with a competitive advantage, which helps it deliver superior customer service (Wu 2010). On the other hand, inadequate resources and capabilities make it difficult for the business to respond to operational challenges effectively. Thus, it is more likely to exit the marketplace as it cannot satisfy customer needs. In contrast, proponents of the organisation ecology theory argue that business failure relates more to the evolution of the external environment (Hannan and Freeman 1977). A company fails due to industry-specific and environmental factors, and managers cannot influence the firm's destiny (Mellahi and Wilkinson 2004). The external environment informs the shape of the venture, its operations, its ability to mobilise critical resources, circulation and the consumption of products or services (Venter et al. 2008). It exerts indirect pressure on the business (Cronje et al. 2004; Nieman and Nieuwenhuizen 2009), and because managers have little control over the turn of events, the likelihood of failure is increased (O'Connor 1994; Stoeberl et al. 1998). The external environment's elements vary from country to country and are primarily influenced by economic, political, and social conditions (Arasti 2011).

While the RBV and EO arguments present relatively straightforward answers, the reality of global competition makes these answers more complex and murkier. Also, one needs to indicate precisely which approach is more critical. In this sense, the true determinants of business survival and failure would comprise a combination of two forces (internal and external factors).

12.2.2 Causes of Construction Business Failure

The literature points to a myriad of root causes of business failures. Some studies argue that businesses fail due to strategic reasons such as the death of an owner without having a succession plan and one company's acquisition by another (Kuruppu et al. 2003; Mata et al. 2011). Others associate business failure with poor strategic leadership, lack of due diligence (Dasgupta and Sanyal 2010), lack of success (Teng et al. 2011), a series of unlikely events (Elenkov and Fileva 2006), economic crisis (Ong et al. 2011) inadequate capitalisation (Davidson and Maguire 2003). High levels of corruption, high credit costs, lack of access to finance, unfavourable regulatory regimes, high taxes rates increases in the interest rate and less demand for products and services have also been reported (Eyiah and Bondinuba 2020). Other factors associated with business failure include lack of industry experience, uncontrolled growth, marketing deficiencies, inadequate control systems, lack of entrepreneurial skills, lack of supervision, financial indiscipline, family interferences, low profit margins, bank loan delinquency, lack of commitment (Amankwah-Amoah 2016; Nangoli et al. 2013; Petrus 2009; Dun and Bradstreet 1986).

Within the construction industry, events that lead to business failure could be associated with the nature of the projects being executed and how well they have been handled. Davidson and Maguire (2003), based on their accountancy experience, identified the ten most common causes of construction business failure: obtaining work in a new geographic region; a dramatic increase in single job size; obtaining new types of work; growing too fast; high employee turnover; inadequate capitalisation; poor estimating; flawed accounting system; poor cash flow; and buying useless items. Schleifer (1990) identified ten similar activities as increasing project size; expanding into an unfamiliar location; undertaking new types of projects and between public/private sectors; replacing key personnel; not maturing in management as business expand; use of inadequate accounting systems; unprofitable projects; uncontrolled equipment costs; payment issues; and accounting systems. Strischek and McIntyre (2008) classified the causes into four groups: financial causes involving slow collections, low profit margins, insufficient capital and excessive debt, bank lines of credit and estimating and bid spread; management weaknesses involving inadequate management, poor risk management, changes in ownership or critical personnel, poor project management, and lack of a business plan; overexpansion involving a change in type/scope of work, the rapid growth of project size, new geographical location, inadequate accounting, estimation and equipment, and unfamiliar client; and uncontrollable involving unreasonable owners, inflation and high material costs or shortages, lack of skilled labour, and uncontrollable work environment. Other studies attribute the failure of construction businesses to how growth has been managed. Usually, this situation is preceded by events including growing beyond the financial and human resources of the firm; focusing on volume instead of profit; poor project selection; poor business acumen and poor leadership and succession (Craig 2012).

Empirical findings support the above observations (cf. Karas and Srbová 2019; Kivrak and Arslan 2008). Lower profit margin entities generally performance in Australia (Barbosa et al. 2017). As a result of fierce competition, construction businesses priced lower than expected. Using the wrong forms of finance negatively impacted their business (Barbosa et al. 2017). The phenomenon in the Czech Republic's construction industry was attributed mainly to high indebtedness, low labour productivity and poor working capital management (Karas and Srbová 2019). In the Turkish construction industry, lack of industrial experience and know-how and unfavourable economic conditions were the two significant issues causing business failure. Consistent with the findings in Australia, construction businesses bid extremely low to be successful in contract awards (Kivrak and Arslan 2008). In the West Bank in Palestine, Enshassi et al. (2006) found a delay in payment, high interest rate, lack of capital, cash flow problems, lack of industry experience and low profit margins. In their study of the USA, Arditi et al. (2000) found that over eighty (80)% of failures were caused mainly by insufficient profits, industry weakness, heavy operating expenses, insufficient capital, and excessive debt. In Saudi Arabia, difficulty in acquiring work, lack of experience, cash flow difficulties, and low profit margins were critical factors causing construction business failures (Osama 1997).

12.3 Research Design and Methods

The specific research that needs to be identified in this study provides information and a better understanding of the failure phenomenon within the construction industry in Ghana. The objective is to define an opinion held by key stakeholders to identify the common contributing factors to construction business failure in Ghana. On this basis, the descriptive approach was considered the most appropriate for the study. This approach afforded the researchers, to a large extent, the opportunity to obtain a high representation of the respondents' opinions. Observation, case study and survey are the data collection methods employed for this approach (Borg and Gall 1989). The survey was selected because secondary data sources of business failure are limited, especially in developing countries, as failed businesses disappear and owners of such ventures rarely talk about the reasons that led to failure (Shepherd 2003; Liao 2004).

The target population comprised construction businesses licensed by the Ministries of Roads and Highways (MRH) and Works and Housing (MWH). In effect, two groups of construction businesses were involved (road and building contractors). These groups are further categorised by the respective ministries, based on their resource capacities, class 1, class 2, class 3 and class 4 (Moo and Eyiah 2019). Consistent with Enshassi et al. (2006), the study sought the views of construction businesses on factors leading to business failure. Professionals within the construction industry are very much abreast with the activities and challenges of construction businesses. Due to needing a comprehensive sample frame, the study adopted a non-probability sampling technique. Specifically, the snowballing sampling technique was utilised to build the sample size through a line of references (Denscombe 2007; Tengeh et al. 2011).

The factors selected for the design of the questionnaires were those identified from the literature, which reflected the thinking of the resource-based view and organisation ecology theory and were considered empirically feasible. The author's experience in the construction industry also had a bearing on the selection of the factors. The questionnaire was designed using the Likert scale; one (1) to five (5). 1 = least significant and 5 = very significant. It was designed so respondents could list additional factors not captured from the literature. Industry experts and some contractors reviewed the questionnaire for refinement, and the revised version was piloted among a selected number of construction businesses and professionals, which minimised any structural weaknesses or deficiencies in the instrument. This practice improves content validity. The questionnaires had four sections: demographics; causes of failure, symptoms of failure; and survival factors. Finally, two questionnaires were developed: one for professionals and the other for construction businesses. A total of two hundred and fifty (250) questionnaires were distributed for answers; two hundred for construction businesses and fifty (50) for construction professionals.

Data from the survey were organised and analysed into summaries. The average or mean scores of the various variables were the critical parameter computed for the analysis. It was computed by adding all the constructs and dividing them by

the number of measurements. This measure of the average scores used to rank the various variables is a sensitive measurement since its value always reflects the actual contributions of each of the variables that the respondent considered to the underlying factors influencing the business failures of the construction businesses. To determine if there was a mean difference between the two sets of observations, we used the paired sample t-test statistical procedure. This method is often used to compare two data sets. Specifically, it can be used to compare construction business failure variables. By analysing the data using this method, we were able to determine if there was a significant difference.

12.4   Analysis and Discussions

This section presents the average scores with the corresponding rankings of the factors causing construction business failure in Ghana. Tables 12.1 and 12.2 illustrate the analysed factors from the views of construction firms and professionals, respectively. From the contractor's perspective, the top five ranked factors causing construction business failure are excessive debt, delayed payments, high cost of credit, working in unfamiliar locations and low profit margin on projects. On the other hand, construction professionals ranked the causes of significance from delays in payments, excessive debt, change in the type of work, high cost of credit and demise of the company owner.

Following the computation of the average mean scores, the variables were compared among the two groups. The paired samples T-test was used to assess whether there was a significant difference between the two groups' views. From the results presented in Table 12.3, both groups agreed on almost all the factors except three as the causes of construction business failure. There were significant differences in the views of contractors and the professionals at a 5% level of significance that the death of the company owner, poor company organisation and lack of competent technical staff were causes of business failure.

The factors that the two groups disagreed on were ignored, and the top five position ranks from each group were considered the significant causes of construction business failures in Ghana. In general, six significant causes of business failure are identified as: delays in payment, excessive debt, high cost of credit, working in unfamiliar regions/localities, low profit margins and change in the type of work. Delayed payment and the high cost of credit can be classified as external factors. These exert pressure on the business (Cronje et al. 2004; Nieman and Nieuwenhuizen 2009), and because construction businesses have little control, the likelihood of failure is increased (O'Connor 1994; Stoeberl et al. 1998). On the other hand, the other factors (working in unfamiliar regions, low profit margin, excessive debt and change in the type of work) occur as a result of decisions made by management. These are internal matters; associated with the resource-based view theory. As a result of poor managerial and technical capabilities, the need to not adequately respond to business challenges.

Table 12.1 Descriptive statistics contractors

Business failure factor	N	Mean	Std. dev	Rank
Lack of experience in construction	120	3.22	0.881	14th
High turnover of key personnel	117	3.35	0.823	7th
Death of company owner	119	3.34	0.969	9th
Poor company organisation	119	3.22	0.761	14th
Lack of continuous access to work	118	3.35	0.820	7th
Pilfering (stealing) at site	118	3.19	0.795	16th
The low profit margin on projects	119	3.45	0.870	5th
Poor cash flow management	118	3.31	0.822	10th
Bidding lower than required	119	3.24	0.799	13th
Inadequate planning on projects	117	3.25	0.798	12th
Lack of access to capital	117	3.39	0.840	6th
Undertaking many projects at a time	120	3.15	0.876	19th
Increased size of projects	119	3.19	0.895	16th
Change in the type of work	117	3.08	0.911	21st
Inadequate management to a commensurate growth	119	3.26	0.887	11th
Lack of competent management staff	119	3.14	0.866	20th
Lack of competent technical staff	119	3.03	0.730	22nd
Negative influence by owner's family members	120	3.18	0.869	18th
Delayed payments from clients	118	3.62	0.942	2nd
High interest on bank loan	118	3.59	1.006	3rd
Working in unfamiliar regions/localities	118	3.54	1.010	4th
Excessive debt	118	4.06	1.056	1st

Authors' construct (2019)

The identified factors concur with the findings of similar studies elsewhere. Three of them: delayed payment, high cost of credit and low profit margin, featured in the key factors causing construction business failure in the West Bank of Palestine (Enshassi et al. 2006). A study in the USA also identified excessive debt and low profit margins (Arditi et al. 2000). Studies in Saudi Arabia identified A lower profit margin (Osama, 1997). Low profit margins caused more than 50% of business failure cases. High indebtedness features in a factor causing the bankruptcy of construction businesses in the Czech Republic (Karas and Srbová 2019) and in the USA (Arditi et al. 2000).

The issue of delayed payment has been a matter of concern in the construction industry in many countries and has been a major contributing factor to poor project performance (Bajjou and Chafi 2018). Construction firms have long bemoaned as unjustifiable the event, which has resulted in the loss of credibility of most of them. More worrying, construction businesses feel they would be victimised if they seek redress from the law courts. The immediate effect on the survival of construction

Table 12.2 Descriptive statistics professional

Business failure factors	N	Mean	Std. dev	Rank
Lack of experience in construction	50	3.42	0.883	11th
High turnover of key personnel	50	3.24	0.870	20th
Death of company owner	50	3.66	0.823	4th
Poor company organisation	50	3.62	0.753	6th
Lack of continuous access to work	19	3.29	0.816	17th
Pilfering (stealing) at site	50	3.02	0.795	22nd
The low profit margin on projects	50	3.26	0.751	19th
Poor cash flow management	49	3.33	0.747	16th
Bidding lower than required	50	3.24	0.822	20th
Inadequate planning on projects	49	3.29	0.816	17th
Lack of access to capital	49	3.37	0.834	15th
Undertaking many projects at a time	50	3.38	0.805	14th
Increased size of projects	50	3.50	0.953	9th
Change in the type of work	50	3.96	4.305	3rd
Inadequate management to a commensurate growth	50	3.40	0.857	13th
Lack of Competent management staff	49	3.55	0.738	7th
Lack of competent technical staff	48	3.48	0.743	10th
Negative influence by owner's family members	49	4.41	0.864	12th
Delayed payments from clients	50	4.50	5.618	1st
High interest on bank loan	50	3.66	0.823	4th
Working in unfamiliar regions/localities	50	3.52	0.909	8th
Excessive debt	50	4.14	1.010	2nd

Authors' construct (2019)

businesses is cash flow difficulties and the inability to continue the execution of the projects. The ripple effect can be dire: locked-up of invested capital, damaged reputation, inability to pay subcontractors, wages and salaries, and creditors, including banks. Recruiting and retaining a quality workforce becomes difficult, affecting future planning. Not being able to service their loans increases the cost of credit as interest charges compound.

It stands to reason that delayed payment is at the root of construction business failures, negatively impacting profitability and growth prospects. When payments are delayed, construction businesses are likely to default on loans, interest charges compound and the overall cost of credit increases. It plunges the businesses into excessive debt, which leads to failure (Karas and Srbová 2019). Some apply the wrong forms of finance in their operations. Cost of credit increases due to the lack of capital assets to serve as collateral on bank loans (Eyiah and Cook 2003). The inability to service outstanding loans due to delayed payments means many would have poor credit ratings, further impacting the cost of credit. Contractors with loans that have

Table 12.3 Paired samples test

	Paired Differences		*t*	df	sig
	Mean	Std. dev			
Lack of experience in construction	− 0.194	1.238	− 0.942	35	0.352
High turnover of key personnel	0.222	1.149	1.160	35	0.254
Death of company owner	− 0.472	1.383	− 2.048	35	**0.048**
Poor company organisation	− 0.556	1.027	− 3.247	35	**0.003**
Lack of continuous access to work	0.139	1.199	695	35	0.492
Pilfering (stealing) at site	0.194	1.167	1.000	35	0.324
The low profit margin on projects	0.194	1.142	1.022	35	0.314
Poor cash flow management	− 0.056	1.040	− 0.320	35	0.751
Bidding lower than required	− 0.028	1.108	− 0.150	35	0.881
Inadequate planning on projects	− 0.028	1.028	− 0.162	35	0.872
Lack of access to capital	0.111	1.116	0.598	35	0.554
Undertaking many projects at a time	− 0.361	1.099	− 1.971	35	0.057
Increased size of projects	− 0.194	1.451	− 0.804	35	0.427
Change in the type of work	− 1.056	4.974	− 1.273	35	0.211
Inadequate management to a commensurate growth	− 0.139	1.355	− 0.615	35	0.543
Lack of competent management staff	− 0.278	1.256	− 1.327	35	0.193
Lack of competent technical staff	− 0.528	1.028	− 3.081	35	**0.004**
Negative influence by owner's family members	− 0.111	1.090	− 0.612	35	0.545
Delayed payments from clients	0.222	1.149	1.160	35	0.254
High interest on bank loan	0.028	1.362	0.122	35	0.903
Working in unfamiliar regions/localities	0.083	1.251	0.400	35	0.692
Excessive debt	0.056	1.413	0.236	35	0.815

Authors' construct (2019)

fluctuating interest rates may find it more challenging to repay their loans. Higher loan payments may lead to reduced profitability which, affects business survival.

Expanding into new geographic areas or projects are ways to grow their businesses. The phenomenon could also be attributed to competition within the industry, which lead to limited construction opportunities (Kivrak and Arslan 2008). Entering new speciality areas is complex and risky, exposing the firms to several potential liabilities. In such events, labour supply, subcontractor quality, and suppliers can be dramatically different, resulting in unforeseen costs and problems. The problems are exacerbated if controls are not adequate, and inadequate, and the company needs more resources, workforce, and know-how to successfully execute growth with low; lower entry to construction creates a saturated marketplace with heavy competition, shrinking profit margins and better business practices. Many construction firms bid low to survive, resulting in a low profit margin (Kangari 1988).

12.4.1 Construction Business Failure: Financial Class and Type of Work

The positions of the various contractors relative to their financial classes and the type of work they undertake were also considered in the analysis. From Table 12.4, the total average score for the financial class 1 group was 3.00, with building class 1 and Road class 1 recording 3.00. Financial class 2 and class 3 had average scores of 3.54 and 3.18, respectively. Though all these are below the average industry score of 3.62, financial class 1 scored the least in terms of considering delayed payment as a primary cause of business failure. Furthermore, building contractors recorded higher average scores than road contractors on delayed payment as a factor. This group of contractors are indifferent to delayed payment, a business failure factor in the Ghanaian construction industry.

Financial class 1 recorded a total average score of 4.11, with building class 1 and road class 1 recording 4.21 and 4.00, respectively, concerning excessive debt. Both class 2 and class 3 recorded a high average score of 3.71. Similarly, concerning the high cost of credit as a cause of business failure, the class 1 contractors recorded the highest average score of 3.69, followed by the class 2 and class 3 groups with average scores of 3.47 and 3.39, respectively. Again, the Unfamiliar regions and location results showed that the class 1 contractors recorded the highest average score of 4.00, followed by class 3 and class 2 groups with average scores of 3.40 and 3.30, respectively. It is important to note that the class 1 group recorded higher average scores in all these three cases than the industry averages.

The fifth observed cause of business failure was the low profit margin. The scores relative to the different financial classes of the contractors showed that Class 2 recorded the highest average score of 3.32, with building Class 2 and road Class 2 recording 3.47 and 3.17, respectively. The next higher score was recorded by the Class 1 group (3.25), while Class 3 recorded a minor average. The industry players

Table 12.4 Views from construction firms: financial class and type of work

Class	Class 1		Class 2		Class 3		Total count
	Ave. scores	Count	Ave. scores	Count	Ave. scores	Count	
Delayed payment							
Building	3.00	19	3.73	64	3.36	22	105
Road	3.00	2	3.34	29	3.00	14	45
Total	**3.00**	**21**	**3.54**	**93**	**3.18**	**36**	**150**
Excessive debt							
Building	4.21	19	3.83	64	4.05	21	104
Road	4.00	2	3.59	29	3.36	14	45
Total	**4.11**	**21**	**3.71**	**93**	**3.71**	**35**	**149**
Cost of credit							
Building	3.37	19	3.63	64	3.48	21	104
Road	4.00	2	3.31	29	3.29	14	45
Total	**3.69**	**21**	**3.47**	**93**	**3.39**	**35**	**149**
Unfamiliar regions and location							
Building	3.50	20	3.56	63	3.64	22	105
Road	4.50	2	3.03	29	3.15	13	44
Total	**4.00**	**22**	**3.30**	**92**	**3.40**	**35**	**149**
Low profit margin							
Building	3.00	19	3.47	64	3.00	22	105
Road	3.50	2	3.17	30	3.14	14	46
Total	**3.25**	**21**	**3.32**	**94**	**3.07**	**36**	**151**
Change in type of work							
Building	3.00	18	2.97	64	3.14	22	104
Road	3.00	2	3.86	28	3.86	14	44
Total	**3.00**	**20**	**3.42**	**92**	**3.50**	**36**	**148**

Source Authors' constructs 2019

also considered the change in the type of work as a factor of business failure in the construction industry. However, since it was ranked relatively low among the contractors, we have decided it is not necessary to discuss it. Figure 12.1 illustrates a summary of the highest ranking from the respective groupings. It could be observed that delayed payment ranked highest with financial class 2 and building contractors. Excessive debt, credit and unfamiliar locality/regions all ranked the highest with financial class 1 contractor three factors ranked highest with building, road and building contractors, respectively. Lastly, low profit margins ranked highest with financial class 2 and road contractors.
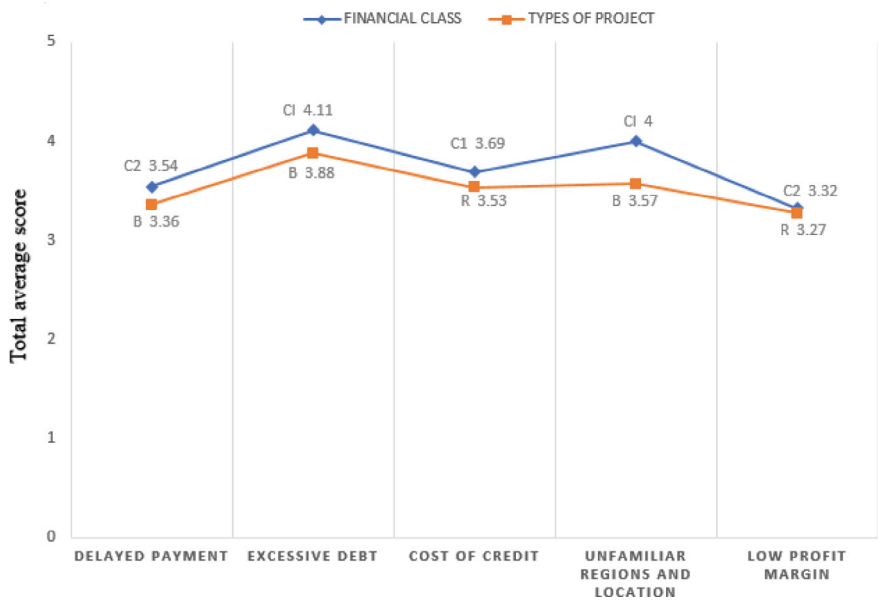
Fig. 12.1 Summary of highest-ranked factors (contractors' views)

12.5   Conclusion and Recommendations

It will most likely fail when a business cannot fulfil its financial obligations to stake-holders for an extended period. The most significant result from this study presents the significant factors leading to construction business failure in Ghana. Delayed payment, excessive debt, high cost of credit, unfamiliar project environment, low profit margins and change in scope of work are the leading causes of business fail-ures. Four factors (excessive debt, low profit margin, delayed payment, and high cost of credit) are related to financial issues. The other two (working in unfamiliar regions and changing the type of work) are growth-related issues. Construction busi-nesses need more control over two factors, delayed payment and high cost of credit. These are considered external environments associated with the organisation ecology theory. However, the other four factors can be regarded as internal factors, as they are based on the decision taken by management. It also emerged that the causes of business failure differ among the different financial classes of contractors and the type of project, with the financial class 1 category placing the most importance on the identified factors. This study's expanded knowledge and information can help guide entrepreneurs who want to enter and develop the construction industry in developing countries contexts. Two main implications emerged from the discussions. First, the study emphasises the importance of effective management and governance of construction businesses. These engender positive externalities that inure benefits

culminating in good financial performance and ensuring the survival of the construction business. Cash-flow difficulties, brought about mainly by delayed payments, are common and unfortunate in the construction industry. It leaves construction businesses strategic in deciding which client group they would want to work with. A well-designed and managed marketing plan could link construction businesses to the private sector for more lucrative contracts. Construction businesses should select work within geographical areas that offer optimum cost control. They should maintain a business strategy that mitigates potentially negative impacts, primarily from increased competition, decreasing price levels, and high borrowing costs. They must pay close attention to overhead expenses as this is the tone of the surest way to increase profit margins. The second implication is closely linked with the role of policymakers in ensuring a conducive construction business environment. Given the importance of the construction business in the development process, serious attention needs to be given to this sector in supporting them to survive and grow their business. There would be a need for a local content policy to increase local construction firms' share in public construction procurement. It would also increase opportunities and incentives for local construction firms to develop their capacity, spur technology transfer and ensure sustainable management of public infrastructure. The government should expedite processes leading to establishing a Construction Industry Development Authority, which is strategic in strengthening, among others, the capacity of contractors.

Although the data analysed are likely to help provide valuable insight into the specific causes of construction business failures, the small sample size might be limited. A further study covering more subjects across the country would help expand the knowledge in this subject matter. A qualitative inquiry involving key stakeholders such as contractors' associations, chambers of construction, construction professionals and public construction agencies responsible for construction would also help provide an in-depth understanding of the subject of construction ilure in Ghana.

References

Abd-Hamid Z, Azizan NA, Sorooshian S (2015) Predictors for the success and survival of entrepreneurs in the construction industry. Int J Eng Bus Manag 7(12):1–11

Ahmad S (2015) Green human resource management: policies and practices. Cogent Bus Manag 2(1):1030817

Altman EI (1993) Corporate financial distress and bankruptcy: a complete guide top redicting and avoiding distress and profiting from bankruptcy. Wiley, New York, NY

Amankwah-Amoah J (2016) An integrative process model of organisational failure. J Bus Res 69(9):3388–3397

Appiah KO, Abor J (2009) Predicting corporate failure: some empirical evidence for the UK. Benchmarking Int J 16(3):432–44

Arasti Z (2011) An empirical study on the causes of business failure in Iranian context. Afr J Bus Manage 5(17):7488

Arditi D, Koksal A, Kale S (2000) Business failures in the construction industry. Constr Archit Manag 7(2):120–132

Assaad R, El-adaway IH (2020) Enhancing the knowledge of construction business failure: a social network analysis approach. J Constr Eng Manag 146(6):40–52

Bajjou MS, Chafi A (2018) Empirical study of schedule delay in Moroccan construction projects. Int J Constr Manag 1–18

Bal J, Cheung Y, Wu HC (2013) Entropy for business failure prediction: an improved prediction model for the construction industry. Adv Decis Sci 2013(14):1–14

Barbosa F, Woetzel J, Mischke J (2017) Reinventing construction: a route of higher productivity. McKinsey Global Institute

Barney J, Hesterly WS (2012) Strategic management and corporate competitive advantage: Concepts. Utah: Pearsons

Borg WR, Gall MD (1989) Educational research. White Plains, Longman. New York, NY

Cochran AB (1981) Small business mortality rates: a review of the literature. J Small Bus Manage 19(4):50

Craig P (2012) EU administrative law. Oxford University Press. Cape Town, SA

Cronje GJ, Du Toit GS, De KMA, Motlatla MDC (2004) Introduction to business management. Oxford University Press, Cape Town, SA

Dasgupta S, Sanyal D (2010) A stitch in time save nine: behind every business failure lies and untold story. Bus Strategy Series 11(2):1–6

Davidson RA, Maguire MG (2003) Ten most common causes of construction contractor failures. J Constr Account Tax 13(1):35–35

Denscombe M (2007) The good research guide. McGraw-Hill Education, Berkshire, England

Dun and Bradstreet (1986) Dun's census of American business. Dun and Bradstreet Corporation, New York, NY

Elenkov D, Fileva T (2006) Anatomy of a business failure: accepting the "bad luck" explanation vs proactively learning in international business. Cross-Cultural Manag 13(2):132

Enshassi A, Al-Hallaq K, Mohamed S (2006) Causes of contractor's business failure in developing countries: the case of Palestine 11(2):1–14

Erol I, Unal U (2015) Role of construction sector in economic growth: new evidence from Turkey. University Library of Munich, Germany

Eyiah AK, Cook P (2003) Financing small and medium-scale contractors in developing countries: a Ghana case study. Constr Manag Econ 21(4):357–367

Eyiah AK, Bondinuba FK (2020) Financing practices and preference of small and medium construction firms in Ghana. Int J Small Medium Enterprises Bus Sustain 5(1):36–60

Godwin-Opara M. N (2016). A Resource-Based Perspective on Financial Resource Strategies for Small Business Sustainability. (Doctoral Dissertation, Walden University)

Hannan MT, Freeman J (1977) The population ecology of organizations. Am J Sociol 82(5):929–964

Holt GD (2013) Construction business failure: conceptual synthesis of causal agents. Constr Innov 13(1)

Holt GD, Edwards DJ (2012) Innovation or business survival? A preliminary, qualitative study of UK construction plant supply chains. Constr Innov 12(1):99–122

International Labour Organization (ILO) (2009) ILO estimates and projections of the economically active population: 1980–2020

Jagafa K, Wood GD (2012) A turn-around model for construction company rescue: failure to success. In: Proceedings of engineering project organisation conference

Jones K (2019) 6 reasons why construction companies fail. Available [Online] at: https://www.constructconnect.com/blog/6-reasons-why-construction-companies-fail. Accessed 18 April 2020

Kangari R (1988) Business failure in construction industry. J Constr Eng Manag 114(2):172–190

Karas M, Srbová P (2019) Predicting bankruptcy in construction business: traditional model validation and formulation of a new model. J Int Stud 12(1):283–296

Kivrak S, Arslan G (2008) Factors causing construction company failure. Building Abroad, October, pp 297–305

Kuruppu N, Laswad F, Oyelere P (2003) The efficacy of liquidation and bankruptcy liquidation. Manag Int J 13(2):132–141

Liao J (2004) Entrepreneurship failures: key challenges and future directions. Entrepreneurship, pp 133–150

Mahamid I (2011) Causes of contractors' failure: contractor' view. In: 2nd international conference on construction and project management IPEDR, Singapore

Mata J, Antunes A, Portugal P (2011) Borrowing patterns, bankruptcy and voluntary models. J Constr Eng Manag 136(6):412–420

Mbat DO, Eyo EI (2013) Corporate failure: causes and remedies. Bus Manag Res 2(4):19–24

Mellahi K, Wilkinson A (2004) Organisational failure: a critique of recent research and a proposed integrative framework. Int J Manag Rev 5(1):21–41

Mofokeng TG (2012) Assessment of the causes of failure among small and medium- sized construction companies in the free state province, Doctoral dissertation, University of Johannesburg

Moo F, Eyiah A (2019) Factors influencing the growth of small and medium construction firms in Northern Ghana. J Afr Bus 1–16

Nangoli S, Turinawe DD, Kituyi GM, Kusemererwa C, Jaaza M (2013) Towards enhancing business survival and growth rates in LDC's. Int J Humanit Soc Sci 3(8):284–291

Nieman G, Nieuwenhuizen C (2009) The nature and development of entrepreneurship. Entrepreneurship. A South-African perspective, 2nd edn. Van Schaik, Pretoria, South Africa

O'Connor GC (1994) Differences in marketing strategies and operating efficiencies in surviving and failed organisations. J Strateg Mark 2(1):1–28

Onakoya AB, Olotu AE (2017) Bankruptcy and insolvency: an exploration of relevant theories. Int J Econ Financ Issues 7(3):706–712

Ong S, Yap VC, Khong RWL (2011) Corporate failure prediction: a study of public listed companies in Malaysia. Manag Finance 37(6):55–64

Osama MJ (1997) Reasons for construction business failures in Saudi Arabia. Proj Manag J 28(2):32–36

Owoo NS, Lambon-Quayefio MP (2018) The role of the construction sector in Ghana (No. 2018/119). WIDER Working Paper

Petrus HG (2009) An investigation into causes of success and failure in small businesses within the Department of Social Development in the Eastern Cape. Master thesis, Rhodes University, Grahamstown

Richardson B, Nwankwo S, Richardson S (1994) Understanding the causes of business failure crises: generic failure types. Manag Decis 32(4):922

Russell JS, Zhai H (1996) Predicting contractor failure using stochastic dynamics of option based credit models—models' performance and comparison with financial ratio prediction models for assessing going concern. Manag Audit J 18(6):577–590

Schleifer TC (1990) Construction contractors' survival guide, vol 66. Wiley

Sharma S, Mahajan V (1980) Early warning indicators of business failure. J Mark 44(4):80–89

Shepherd DA (2003) Learning from business failure: propositions of grief recovery for the self employed. Acad Manag Rev 28(2):318–328

Stoeberl PA, Parker GE, Joo SJ (1998) Relationship between organizational change and failure in the wine industry: an event history analysis. J Manage Stud 35(4):537–555

Strischek D, McIntyre M (2008) Credit risk management-red flags and warning signs of contractor failure-a timely review from a surety industry perspective on warning signs of impending contractor failure. RMA J 90(6):72

Teng HSS, Bhatia GS, Anwar S (2011) A success versus failure prediction failure model for small business in Singapore. Am J Bus 26(1):50–64

Tengeh HSS, Bhatia GS, Anwar S (2011) A success versus failure prediction failure model for small business in Singapore. Am J Bus 26(1):50–64

Tserng HP, Liao H, Tsai LK, Chen P (2011) Predicting contractor default with option based credit models—models' performance and comparison with financial ratio models. J Constr Eng Manag 136(6):412–420

Ucbasaran D, Shepherd DA, Lockett A, Lyon SJ (2013) Life after business failure: the process and consequences of business failure for entrepreneurs. J Manag 39(1):163–202

Venter R, Urban B, Rwigema H (2008) Advanced entrepreneurship. Oxford University Press, Cape Town SA

Wong JMW, Ng ST (2010) Company failure in the construction industry: a critical review and a future research agenda. Available [Online] at: www.fig.net/pub/fig2010/papers/ts01m%5Ct s01m_wong_ng_4360.pdf. Accessed on 20 April 2020

Wu M (2010) The search for sustainable competitive advantage: a stakeholder management perspective, Doctoral dissertation, Massey University, Albany, New Zealand