

Factors Contributing to Business Failure in the Construction Industry

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Abstract: As a result of failures of construction companies, economies, owners, governments, creditors, and surety companies receive losses in the form of unfinished projects and responsibilities. Researchers have historically used arbitrary insolvency causes or data that is not readily available to predict construction business failure. In large numbers of studies, it has been demonstrated that identifying the critical factors contributing to the failure of construction businesses does not have a holistic framework, and that such a framework is necessary. As a result, a scoping review study was administered on critical factors contributing to construction industries business failure. Several factors have been discovered as contributing to business failures for construction firms based on research results which will be explored using a scoping review and will be illustrated with a thematic analysis. Additionally, future research is essentially needed to explore some poorly studied critical factors, such as how human capital are organized and managed in an insufficient manner which contribute to construction business failures. Due to the integration of previous works and the use of results for knowledge advancement, the findings presented here are significant contributions to the area of study about business failure in the construction industry. According to the guidelines presented, areas where excessive research occurs will be closed, and areas where further investigation is appropriate will be revealed.

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I. INTRODUCTION

Businesses in competitive environments, such as construction, must be successful in order to survive. Considering the emergence of start-up ventures processes and mechanics, the construction sector is continually changing (Koota 2003). As a result, construction firms should monitor these applications and adopt relevant tactics in order to compete more effectively in this field. Construction is a dangerous business, thus failure is always a possibility, regardless of the size of the organisation. As a result, in order to avoid business failure and prosper in the sector, construction companies must consider essential elements. Failure can come in many different forms. The term "bankruptcy" is frequently used in definitions of failure (Balcaen and Ooghe 2006). Construction company insolvency has grown increasingly common in recent years. This is mostly owing to the industry's key structural substitutes, like globalisation, technical advancement, competition and regulation increase. The combination of these elements, as well as the economic emergency afflicting most European countries, makes assessing the risk of failure a vital task for anticipating issues and developing adequate long-term plans. The failure of a firm is defined by Frederikslust (1978) as its inability to pay its obligations when they are due. Studies of success and failure in project management have increased in recent years (Hyvari 2006). Various authors have explained the causes of failure in

construction at the project level, including Hall (1982) and Morris and Hough (1987). Arditi et al (2000) is one study that looks at construction failure at the firm level. According to their research, common aims for construction business failure in the construction industry were budgetary and macroeconomic concerns. Age-related problems in construction organisations were investigated by Kale and Arditi (1999). Information regarding business failures can help entrepreneurs who are thinking about launching a firm. It shows the dangers that come with working in the construction sector. The study can also help risk managers gain experience. After failing in prior ventures, a number of people have gone on to become successful entrepreneurs. The topic of corporate failures has piqued the interest of researchers, though theoretical development in this sector has lagged behind in startups and their counterpart's development (Storey 1994). Several models have been developed to assess financial performance of business failures over the last three decades. To calculate financial ratios, statistical approaches are used to produce many reasonable valuations (Kangari et al. 1992). Kivrak (2008) conducted research on the elements that contribute to construction company failure, and the following were found to be the most important.

The most critical variables in company failure were found to be having no business experience and the difficulties of the economy. Assaad (2020) looked into the elements that contribute to business failures as a whole. Lack of project

management procedures, capital, and skilled personnel are all reasons for construction failure. According to Arditi (2000), financial and microeconomic issues are the primary causes of construction firm failures. This suggests that businesses who take proactive administrative measures to address financial difficulties and adapt rapidly to changing economic conditions by implementing relevant strategic initiatives could avoid failure. Inefficient financial management and a lack of resources, according to Novela (2018), are important reasons for the collapse of small businesses in construction in South Africa. Thwala (2008) investigated the challenges that small and medium-sized contractors in Swaziland experience and discovered that lack of access to finance and government late payment are two of the factors contributing to construction business failure. Assaf (2013) claims that management ineptitude; weak accounting systems and records, problems hiring great employees, reliance on a low patronage, and absence of sound business plan are the most usual motives of small contractor failure in Saudi Arabia. According to Okereke (2021), respondents indicated five key causes of insolvency in the construction sector out of 11 possible causes. There are no entrance obstacles, income issues, poor budget control, carry over effect, or excessive contract agreement among them. To each of these five major causes, there are more than 70% answers. All five major insolvency difficulties, according to the respondents, could be caused by unethical behavior. According to the respondents, contractors who engage in unscrupulous tactics, such as

intentionally delaying payment, misrepresenting financial position, and so on, are more likely to go bankrupt.

II. RESEARCH METHODOLOGY

The emphasis is on real-world study into the factors that contribute to construction company failure. Scoping reviews are beneficial for summarising research findings and are commonly utilised to categorise available studies in a field based on their class, characteristics, and capacity (Arksey & O'malley, 2005). Based on Arksey and O'malley's (2005) five-stage paradigm, I propose a scoping study design. The steps encompass "define the study's topic, find important researches, research preference, data charting, and compiling, summarising, and outlining the conclusion."

➤ Scoping Study Process

Scoping review approach as described below, a Google Scholar search was undertaken to locate the following: current research: Factors contributing to the failure of business in the construction sector. The study's topic issue must be specified in order to generate a wide range of data while also considering additional outstanding sources (Arksey & O'malley, 2005). The study's real question was "factors contributing to business failure in the construction industry." As demonstrated below in table one, relevant results from existing researches were recognised utilising a critical search engine (second stage).

Table 1: Search Strategy – Key Search Terms

- (Factors affecting business* OR company failure) AND (construction industry OR built environment)
- (Causes of insolvency* OR failure of business) AND (building industry OR construction industry)
 - (Reason for company failure) AND (built environment OR road construction industry)

The primary source of information for the search was electronic, namely Google Scholar, with inclusion and exclusion criteria divided into two phases as outlined. Due to the initial set of inclusion and exclusion criteria, searches

were confined to a certain period of time, language, and subject, significantly lowering the number of studies found. Furthermore, studies that were not applied were removed, reducing the number of studies detected.

Table 2: Inclusion and Exclusion Criteria

Criteria for inclusion and exclusion		
Criteria	Inclusion	Exclusion
Time Period	2000-2022	Studies Prior 2000
Language	English	Other Languages
Subject	Construction Industry	Non Construction Industry

Scoping Review Process

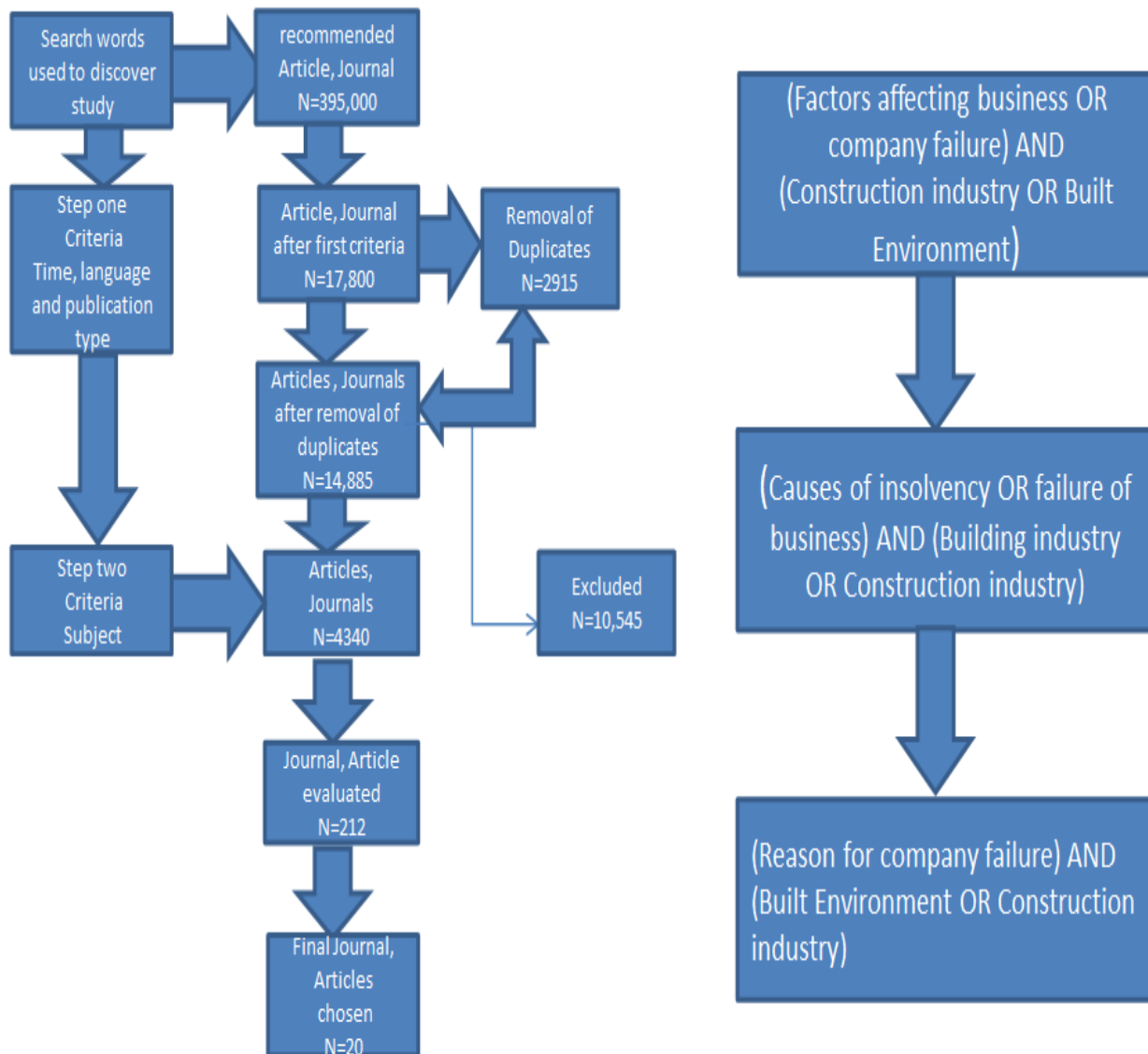


Fig 1: Scoping Review Process

"Charting significant items of information gained from the primary research report being evaluated" is the fourth stage. By sifting, charting, and arranging information according to major subjects, 'charting' (Ritchie and Spencer) explains a technique for unifying and clarifying qualitative

data. Hawker's approach was employed in classification since it delivers an ordered reference for reviewing papers using the same criteria as Onuigbo et al (2015). The table below provides more information.

Table 3: Quality Assessment Methodology

Protocol	First Author's Name									
	Alaka (2017)	Arditi (2000)	Bal (2013)	Dikemi (2010)	Holt (2013)	Gadekar (2014)	Assaad (2020)	Horta (2013)	Jang (2020)	Novela (2018)
Title/Abstract	3	4	3	4	4	4	3	4	3	4
Introduction	4	4	3	3	3	3	3	3	4	4
Methodology	3	4	4	4	4	4	3	4	3	3
Sampling	4	5	4	5	4	4	4	5	4	5
Data and analysis	3	4	4	4	3	3	4	4	3	4
Results	4	4	4	3	4	4	3	3	3	3
Implication	3	3	3	3	3	3	4	3	3	3
Total	24	28	25	26	25	25	24	26	23	26
Key: 1-Very Poor 2-Poor 3-Fair 4-Good 5-Very Good										

Kivrak (2008)	Assaf (2013)	Aigbavbola (2014)	Thwala (2008)	Okereke (2021)	Arain (2008)	Patel (2014)	Ikedashi (2014)	Kalamagye (2021)	Gazder (2018)
3	3	3	3	4	3	3	3	3	3
3	3	3	3	3	3	4	3	4	3
3	3	3	4	4	3	3	4	3	4
4	3	4	3	5	4	3	4	4	3
3	3	4	3	4	4	4	3	4	4
3	4	3	3	3	3	3	4	4	3
3	4	4	3	3	4	3	3	4	4
22	23	24	22	26	24	23	24	26	24

Table 4: Scope Study Outline of Research Included

Outline of Critical factors contributing to business failure in the construction industry						
Study/Author	Sample	Aims and Objectives	Method	Analysis	Key findings	Score
Arditi, D. (2000)	Factors used in Dun and Brad street business failure records	The objective of the research is to explore the factors associated with company failures in the context of the construction industry.	Literature Review	Four quadrant environment/response matrix distribution	Budgetary and macroeconomics issues represent 83% of the reasons for construction company failures. It implies that firms that take vigorous administrative measures to address budgetary issues should be able to avoid failure. On the other hand, adaptability to market conditions and business issues appear to have limited effect on company survivability.	28
Okereke, R.A., (2021)	90 Contractors in Imo state, Nigeria	The study evaluated insolvency and determined its causes in the construction industry in Nigeria.	Questionnaire	cross tabulation and mean ranking	The study concluded that of the 11 potential causes of bankruptcies in the construction sector, absence of entry barriers, issues with cash flow, poor financial monitoring, knock-on consequences, and onerous contract terms.	26
Novela, B. (2018)	South Africa construction companies	The study is set out to determine the factors which contribute to unstable emerging construction companies.	Primary data was collected via a questionnaire comprehensive literature review	Online survey	The research revealed that two primary factors that contribute to failing emerging construction companies are ineffective financial management and a lack of resources	26
Horta, I.M. (2013)	Strategic variables reflecting the key specifics of construction companies, Portuguese contractors that operated in 2009	To propose a new model to predict company failures in the construction industry.	The use of two different sampling methods (random undersampling and random oversample)	Data mining technique (support vector machine)	SVM model with a random oversampling and including strategic variables is a very robust tool to predict company failure in context of the construction industry	26
Dikmen, I. (2010)	Applicability of the proposed model is tested on five companies to estimate their failure likelihood	To identify the determinants of business failure in construction and to predict the failure likelihood of construction companies by assessing their current situation based on both company-specific and external factors.	Extensive literature survey	Analytical process together with the Delphi method	The result suggested that the importance of organisational and managerial factors, including the efficiency of the value chain at the corporate level, the appropriateness of organisation decision, and the availability of intangible resources for the survival of construction companies.	26
Bal, J. (2013)	Information of financial ratios derived from Taiwanese construction company	The aim is to appraise empirically the usefulness of information measures (derived from information theory) in the prediction of construction failure.	Literature Review	Discriminant analysis with information measures derived from financial ratios.	The research found that "return of assets" "return on capital" and "earning per share" are good discriminators between failed and unfailed companies.	25
Holt, G.D., (2013)	Corporate finance and construction management disciplines	The aim is to synthesize published knowledge in the subject domain to explore construction agents	Studies drawn from both corporate finance and construction management disciplines are synthesized	Subject, textual analysis is undertaken and casual agents thematically grouped	Generic failure agents (GFA) (ordered, based on percentage frequency observed are shown to be managerial, financial, company characteristic and macroeconomics.	25
Kalamagye, J., (2021)	80 construction contractors, 58 consultancy firms and 32 clients	The aim of this study is to find out the challenges which causes failure experienced by contractors in the execution of roads and bridges construction contracts and to develop a strategy to mitigate the failure.	Online questionnaire	Analysis of variance	The analysis showed the top 5 causes of failure as identified by the contractor which are lack of capital, adopting unsuitable procurement practices, inefficient deployment of resources, award contracts to lower prices and lack of controlling equipment cost usage.	25
Gadekar, A. (2014)	7 construction companies in which cash flow was identified as important factors, 30 Indian construction companies	To recognise any potential company success and failure at the earliest opportunity.	Survey, Literature review	Point rating review	Cash flow management characteristics was identified as the most main factors to success among large size firms, insufficient capital, organization and planning are the most contributing factors to avoidance of company failure.	25

Aigbavboa, C.O., (2014)	Small and medium contractors within grade 1-4 of the South Africa construction industry development board	To investigate current challenges and problems facing small and medium size contractors (SME)	Structured questionnaire survey	mean score	The results indicated that external factors such as high competition when tendering for construction jobs with CIDB category is a major challenge to the SME's face in the procurement of work. Also, internal factors such as poor administrative management, to deliver on certain projects where the greatest challenges faced by the construction companies.	24
Assaad, R (2020)	Secondary data of past events	To identify existing knowledge, current gaps, and needed future research directions on different failure factors in a comprehensive approach	Literature Review	Meta-analysis	The result indicated the effect of inadequate organisational structure and human capital in business failure.	24
Ikediashi (2014)	67 construction experts with management experience	The study develops a framework and classifying causes of project failures in the Saudi Arabia construction industry.	Quantitative questionnaire	mean score	Findings revealed that poor risk management was rated the most critical failure factors for infrastructure projects, while budget overruns and poor communicating by management. Among the extracted factors are project management deficiency, risk challenges and government interference.	24
Arain, F.m., (2008)	90 contractors	This study identifies the cause of insolvency in the construction industry and the unethical practices that may lead to such causes of insolvency in the industry	Questionnaire, face to face interview	Mean score	Five majors significantly caused insolvency of contractors in the industry are absence of barriers, cash flow problems, poor financial control, knock-on effects and onerous conditions of contract.	24
Alaka, HA (2017)	Prediction model (CI-IPM) studies employed or adopted from previous studies	To identify the most important insolvency factors for a high-performance CI-IPM	Accuracy model and questionnaire	Cronbach's alpha reliability coefficient and significant index ranking	Finding shows that the important quantitative factors are profitability, liquidity, leverage, management efficiency and cash flow.	24
Gazdar, U., (2018)	Professionals belonging to different construction projects and organisational structures	It focuses on providing a rating factors affecting construction project failures in the construction industry in Karachi	Interview	mean score	The result shows that the factors related to project planning and management are related higher by professionals in general. It was also observed that client satisfaction and its related factors were rated higher by organisation with project based management structure.	24
Assaf, s., (2013)	43 Contractors	To understand the reason behind failure of small contractors and identify the most important factors contributing to their failure	Questionnaire survey	mean score	It was deduced from the research that the most crucial causes of small contractor's failure are management incompetence, poor accounting system and records, difficulties in attracting good personnel, dependency on a very limited customer base and lack of effective business plans.	23
Patel, R.N., (2022)	Three construction companies	The paper focuses on identifying and prioritising top reasons for contractor insolvency.	Questionnaire survey	Relative important index and respective rankings	The top 10 reasons include cash flow problems, underbidding, poor business management skills, poor financial control, overtrading, domino effect, diversification, illegal phoenix activities, overwhelming contract claims and predominance of trade credit.	23
Jang, Y. (2020)	Use of accounting variables, construction market and macroeconomics variables	To examine the effect of combination of these variables on the business failure prediction performance of construction contractors in the United States and compared the effect of combinations of these variables between three modes that predict business failures within 1, 2, 3 years	Financial ratios and non financial information	Using a long short-term memory (LSTM) Recurrent Network (RNN) which is a deep learning algorithm	The result shows that the prediction model using both construction market and macroeconomics variables had approximately 2%, 3% and 4% higher prediction performance compared with that using only accounting variables when predicting with 1, 2, 3 years respectively.	23
Thwala, W.D. (2008)	15 Companies, 100 contractors currently registered with the ministry of public works and transport roads and building sections	The main objective of this paper is to outline the problems faced by small and medium size contractors in the kingdom of Swaziland.	Primary and secondary literature, 100 questionnaire	Mean Percentage	The paper reveals that the most problems facing the small and medium contractors in Swaziland is lack of access to finance and late payment by government.	22
Kivrak, S., (2008)	40 Small- medium sized Turkish construction companies	Aim of the study is to investigate the critical factors causing construction company failure	Questionnaire, face to face interview	Simple multi Attribute rating technique (SMART)	Lack of business experience, and country's economic conditions were found to be the most important factors to company failure.	22

III. FINDINGS AND DISCUSSIONS

Thematic analysis is a particularly effective tool for developing theoretically informed interpretations of a specific research situation (Braun and Clarke, 2006). The objective of the study is to analyse the key factors that contribute to business failures in the construction industry, a problem that has affected many businesses and has had a detrimental impact on the industry. Most firms on the construction industry are small-scale businesses that hire contractors on a project-by-project basis. Workers in construction have are now extremely flexible based on economic accomplishment of various specialties. This has had a substantial influence on skill training and the industry's ability to retain knowledge. The evident in the rigorous cohesion to administrative procedures and construction techniques passed from the primitive era, due to a lack of competence and aptitude, were passed down from generation to generation. Because of its sensitivity to economic cycles and competitiveness, the construction industry faces very high risks that could lead to

contractor failure. It is simple to find contractors because getting into the construction industry is simple, Poor and disorganised implementation can readily occur, increasing the risk of failure. Poor accounting processes and records, poor cash flow, poor financing, and debt collection challenges are all major causes of construction sector failure. Lack of control of system and defective planning of business are two other factors for failure. These two factors are occasionally brought to the contractor's attention. Due to a shortage of staff to execute the control and implement the business strategy, the contractor has little alternative except to work around these challenges. Workers' concerns, such as trouble attracting good workers, a high reliance on select key personnel, and difficulty acquiring visas to hire new personnel, are part of the top failure effect, especially among contractors that are small.

Inductive analysis will be utilized to examine the critical factors contributing to failure of business in the construction industry as highlighted below.

Table 5: Critical Factors Contributing to Failure of Business in the Construction Industry

Factors	Category/Theme
Insufficient profit	Budgetary issues
Heavy operating expenses	
Insufficient capital	
Burdensome	
institutional debt Receivable difficulties	
Lack of business knowledge	Human/organizational capital issues
Lack of managerial experience	
Fraud	
Lack of line experience	
Lack of commitment	
Poor working habit	
Inadequate sales	Issues of adaptation to market conditions
Not competitive	
Overexpansion	
Business conflicts	Business issues
Family problems	
Industry weakness	Macroeconomic issues
Poor growth prospect	
High interest rate	

A. Budgetary issues

Financial data is widely thought to be the most important criterion for evaluating a company's success and anticipating its failure trend (Arditi, 2000). However, some theorists claim that financial values can be manipulated and that inventive accounting procedures prevent managers, creditors, and financial institutions from assessing the firm's true performance. 'The higher the company's liquid assets (i.e., cash flow), the lower the risk of failure; the higher the operating expenses, the higher the risk of failure; and the higher the amount of debt carried, the higher the risk of failure,' according to the researchers. Several academics, meanwhile, have looked at financial data and firm size interconnection. Financial metrics are not as important to small businesses as they are to larger businesses. Large companies utilise an accounting staff which produces regular details of finances, making financial ratios simple to track, while small enterprises use independent accountants. Moreover, financial data in small businesses are far more susceptible to manipulation due to the CEO's control.

B. Human/Organisational Capital Issues

An absence of knowledge of business, a shortfall of executive expertise, fraud, a lack of line experience, inadequate dedication, and awful diligence are some of the reasons for failure. Learning theories explain three of the most common human/organizational capital difficulties that lead to business failures: 'lack of business understanding,' 'lack of managerial expertise,' and 'lack of line experience.' Organisational learning shapes an organisation's structure through gathering details concerning the condition of the society and developing the organisation's capabilities. Psychologists are more interested with individual learning in theory, whereas organisational theorists are more concerned with the structure and environment of the organisation. Environmental ecology and organisational adaptability concepts have inspired many approaches in this area. The first is the build-up of understanding and abilities as the company becomes older, and growing consistency and integrity of company conduct through time. Organisational learning, according to the adaptation approach, entails not only gaining competency in specific schemes, schedules, innovations, or objectives, however once certain competencies no longer support previously set targets, an examination of alternative routines, technologies, and goals occurs. In addition to a lack of business knowledge, a lack of industry expertise, understanding of the market, and practical information about how to locate and attract clients, suppliers, and distributors can also be found. Inadequate knowledge of business can also refer to an absence of deep knowledge of industry, market awareness, and specialised feasible understanding about where to discover and attract clients, suppliers, and distributors. According to Argenti (1976) failure due to a lack of manufacturing experience under human/organisational capital issue is one of the causes for failure. The failure of one or more of a company's projects can lead to its collapse in the construction sector.

C. Issues of Adaptation to Market Conditions

According to studies, Tactical scheduling is a crucial factor that can help a company adapt to its environment. Because strategic planning oversees resource extraction and

utilisation in order to maximise sales, competitiveness, and expansion, this is the case. The knowledge and comprehension of the environment by the organisational actors is important while designing the strategy. The type of industry and the passage of time have an impact on the interconnection linking an organisation and its environment. Indeed, the three attributes listed as adaptation barriers, "trading," "competition," and "growth," are all highly industry-specific occurrences that change over time. 'Sales shortage' is a key problem concerning home construction sector. It is unknown whether the majority of houses created by a private developer will be sold or rented. Speculative housing building is dangerous due to the size of apartment purchase and because investment can be deferred. The degree of demand in this industry is influenced by overall economic conditions, substitute investment options, environment, plan, and standard. Another aspect of adaptability is a corporation's 'rivalry.' As explained by the competitive exclusion rules, in a surrounding with strong competition and limited resources, two kinds that make their living the same way can't coexist. A corporation must be distinct enough in a competitive market to have a distinct advantage over its competitors (Porter, 1991)

D. Business Issues

These kinds of difficulties include "business disagreement" and "family problems," which are both contributing factors to business failure. Conflict in the workplace is a collapse in the normal management process, forcing an individual or group to struggle to choose a course of action. Despite the fragmentation of organisations, uncertainty nature of contract language and unpredictability on construction sites, hostile connections with involved parties and generally poor margins of profit, business conflicts are more common in the construction industry than in other industries (March & Simon, 1991). Conflict can arise at the project level during the planning, design, bidding, and construction phases. In this category, 'family difficulties' refers to long-term injuries, mortalities, and family divorce of the person(s) who play key parts in operation in the company. Individual features influence survivorship in either a positive or bad way. Meanwhile, it is believed that the traits comprise of a stronger outcome on the survival of small businesses due to the chief executive's higher power.

E. Macro-Economic Issues

Companies' failure or success is largely determined by industry conditions. Industry weakness causes business failures, which tend to reduce as economic conditions improve. It is well understood that overall macroeconomic developments have an impact on the construction industry. It is a significant industry of the national economy since it largely offers investment goods, is huge, and includes a diverse group of contributors, comprising owners, consultants, suppliers and contractors. Firms in the Construction industry do not have a significant market share, and so no firm may exercise market dominance. Larger firms, on the other hand, manage the majority of the work, despite the fact that the most of the firms are small and medium-sized. The construction industry is a highly dynamic industry with market ups and downs. Business conditions, financing rates,

and growth projections all have an impact on construction investments (Platt & Platt, 1994) Construction demand is lowered during times of recession, which fuels severe rivalry among contractors. As a result of this situation, contractors

are forced to present unreasonably low bids on construction projects outside their specialty or abilities, forcing numerous businesses to fail.

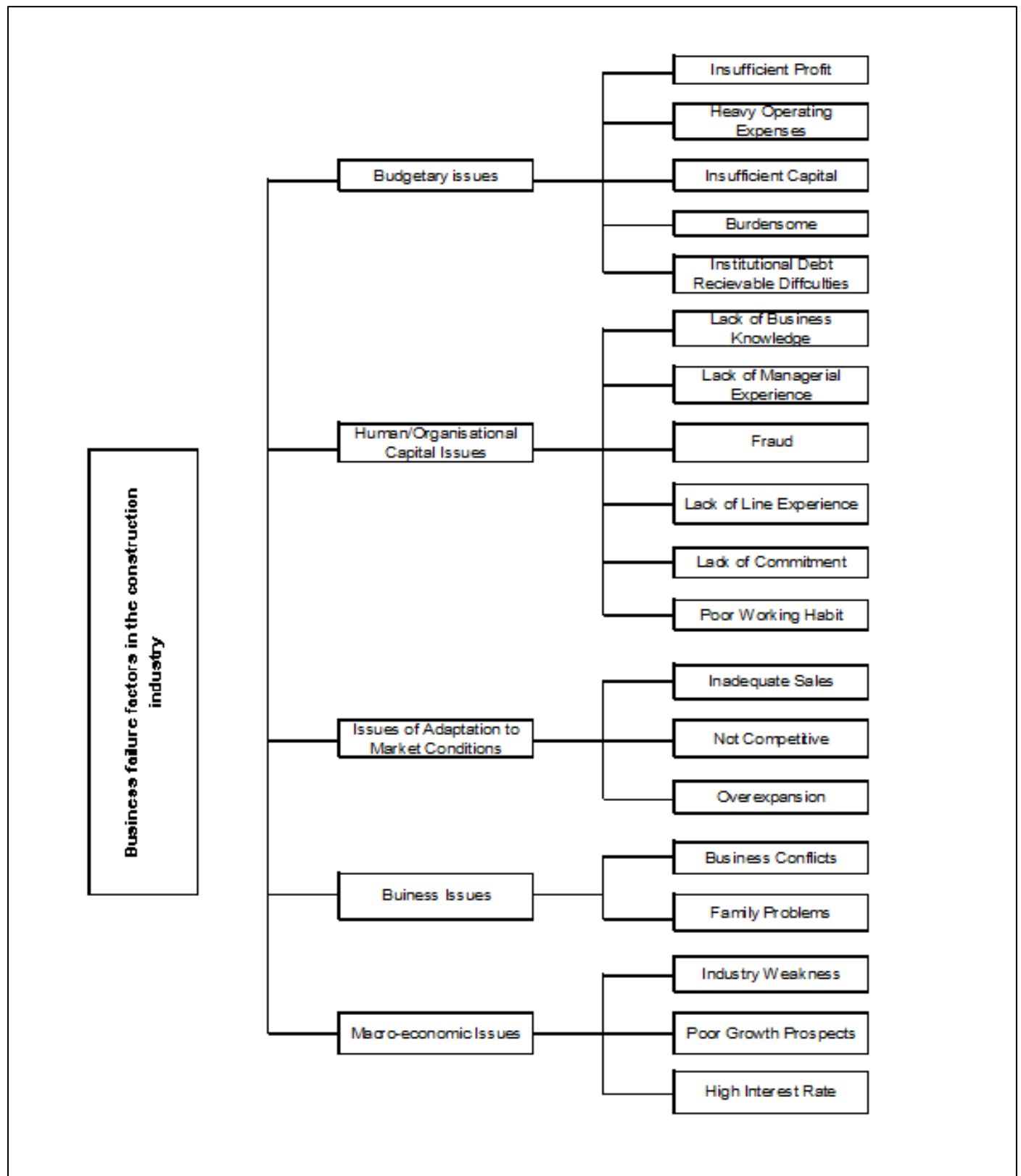


Fig 2: Conceptual Framework of Critical Factors Affecting Business Failure in the Construction Industry

IV. CONCLUSION AND RECOMMENDATION

Thematic analysis with an inductive method is used to articulate the variables which cause failure of business, and factors that are identified are categorised based on difficulties for business failures in the construction industry. Limited profit, high expenses of construction operations, inadequate resources, and cumbersome and troubles involved in debts receivable from institutions are among budgeting concerns. Insufficient expertise in business, lack of managerial experience, fraud, lack of line experience, lack of dedication, and poor working habits are all examples of human/organizational capital challenges. Inadequate sales, not rivalry or overexpansion, are the problems associated with market adaptation. Business disagreements and family problems are examples of business challenges, while macroeconomic issues include industrial weakness, bad growth expectations, and a high interest rate. These factors appear to affect the success or failure of construction enterprises either directly or indirectly (via the effect on performance of company). The rates and causes of failure are obviously time-dependent. Most of the time, the effect of firm achievement on failure of business is not instantly obvious, however becomes apparent after a period of time.

As a result of the study's findings, it is recommended that adequate capital and usage be followed in order to avoid failure of companies in the construction industry as a result of its relevance. Contractors and owners of construction companies should follow proper procurement procedures because one of the major contributors to corporate failure is the use of inappropriate procurement procedures. The dangers of accepting lower-priced contracts should be considered, as should the necessity of project management procedures.

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