

# Factors Affecting Contractors and Subcontractors Relationships in the Saudi Construction Industry

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## Abstract

The purpose of this study is to examine the dyadic relationship between contractors and subcontractors in the Saudi construction industry. The perceptual differences in buyer-supplier relationships to determine the factors that affect contractor—subcontractor relationship and its impact on project completion. To gain insight into and a deeper understanding of the topic, this research adopts a qualitative method using four case studies from the industry: one buyer firm and three suppliers. Twelve interviews were conducted in total, three with the buying firm and three with each subcontractor. From the main contractor's point of view, the most important factor that affects the contractor and subcontractor relationship is delays, which means projects fall behind their schedule caused by the subcontractor. Conversely, from the subcontractor's perspective, the most important factor influencing the contractor-subcontractor relationship is delays in contract progress payments. *Theoretical contribution:* the research contributes to the buyer-supplier literature by providing a dyadic study and showing how the buyer and supplier have different views about their relationship. *Methodological contribution:* A case study approach was used that led to an examination of issues that were not explained by previous studies. *Practical contribution:* useful information was provided for both contractors and subcontractors, such as the factors that affect their relationship. Identifying these factors and their impact on their relationship will enable both parties to act to remove these barriers and obstacles that prevent them from developing deeper and clearer relationships with their partners.

## Keywords

Contractor-Subcontractor Relationship, Factors Affecting Contractor—Subcontractor Relationship, Construction Industry, Saudi Arabia

## 1. Introduction

The management of the buyer-supplier relationship (BSR) is one of the most essential aspects of supply-chain management. Indeed, effective supplier-relationship management can improve a company's competitive advantage (Morgan & Hunt, 1994). Moreover, A sound contractor-subcontractor relationship could be the solution to most project problems, such as cost overruns and delays. The relational theory proposes that some resources or capabilities are not available internally to the firm; therefore, the firm looks for an external provider that has the knowledge and capability to perform a specific task (Morgan & Hunt, 1994). A supplier can be a source of competitive advantage for the buying firm—for example, if it has specific assets that are not available to competitors, advanced know-how/technology, complementary resources and capabilities, or effective governance (Dyer & Singh, 1998).

Traditionally, general contractors would perform whole projects using their own capabilities. Now, however, the role of the general contractor has changed and it is mainly concerned with activities such as surveying, contract management, estimating budgets, and planning, directing and controlling projects. About 70% of project work is executed by subcontractors; this increased reliance on subcontractors in the construction industry could be due to the fact that contractors take advantage of subcontractors' specialisations to enhance their overall capability, as well as to free up their resources (Okunlola, 2015). Moreover, outsourcing allows firms to free up their capacity and to focus more on their core competencies, which improves their operational efficiencies at the same time as improving their flexibility (Conner & Prahalad, 1996). Nevertheless, outsourcing has increased the importance of the effective management of contractor-subcontractor relationships, as many of the organisation's critical activities are performed by external parties (Saeed et al., 2005). Therefore, this puts pressure on main contractors to manage their subcontractors efficaciously, as they are effectively part of their supply chain. In Saudi Arabia, like other countries, general contractors assign a large percentage of construction works to subcontractors. Therefore, it is essential to study the factors that cause interface problems between contractors and their subcontractors within the Saudi construction industry.

## 2. Literature Review

A construction project involves a number of parties, such as clients, general contractors, subcontractors, and material suppliers, who interact during the project. The interactive relationship between these parties cannot occur without interface problems (Okunlola, 2015). According to Huang et al. (2008), the likelihood of interface problems occurring would increase as the construction project progressed, as well as the interactive relationships among the involved parties became more complex. Interface problems between the general contractor

and the subcontractors may arise due to many factors, such as poor communication or lack of cooperation, which might affect the project's completion (Okunlola, 2015). Many researchers have studied the interface problem, attempting to find a common theme. For example, Stuckenbruck (1983) categories interface problems into personal, organisational, and systematic problems, while Pavitt and Gibb (2003) grouped them into physical, contractual, and organisational. Some other researchers examined the common interface problems between supply chain actors, such as Al-Hammad (1993, 2000), Enshassi et al. (2012), and McCord and Gunderson (2014).

In this research, common interface problems will be studied, as one of the objectives of the research is to identify the factors affecting the relationship between the contractor and subcontractors. Moreover, common problem studies have a broader scope which will allow the researchers to explore more issues. The factors will be studied from both perspectives (the contractors and subcontractors perspectives). This will provide an in-depth understanding on which of these factors is the most affecting factor on their relationship as well as the extent of impact of these factors on relationship from both perspectives.

Al-Hammad (1993) has conducted a study on the factors that affect the contractors and subcontractors interface problems in the Saudi Arabian construction industry. He conducted a literature review to identify the most common factors that affect the contractor and subcontractor relationship, then surveyed 16 contractors and 17 subcontractors to determine which factors are most relevant to the Saudi construction sector. The study resulted in 24 factors that influence the relationship between contractor and their subcontractor. Furthermore, the study found that five factors have the highest importance rank in terms of affecting the relationship in the Saudi construction industry. These factors are: "delay in contractors processing payments", "lack of quality construction work", "execution errors", "delay in shop drawings and/or sample material approval", and "scheduling conflicts between the contractor and the subcontractor" (Al-Hammad, 1993).

Delay in payments is the highest-ranking issue as it has a significant impact on the subcontractor's cash flow and the ability to pay their labourers, which might lead labourers to stop working and as result delay the project's completion. The second highest factor was lack of quality, because works that do not meet the agreed standard cause a serious conflict between contractor and their subcontractors, as they need to deliver the project to the owner's standards to be approved. Execution errors were ranked as the third factor, because execution mistakes by either the contractor or the subcontractor impacts the progress of another party and as result creates a serious conflict between the involved parties. The fourth factor was a delay in shop drawings and/or sample material approval, because the long procedure and the slow approval process by the owner or the contractors delayed the subcontractors starting the work. Such problems happen with increasing frequency, causing serious problems between the con-

tractor and the subcontractors. Finally, scheduling conflicts between the contractor and the subcontractor was ranked highly because poor scheduling significantly affects the overall planning of the other party.

Later research by [Al-Hammad \(2000\)](#) has studied the common factors that affect the relationship between different construction parties. The study surveyed 20 owners, 24 contractors, 22 subcontractors, 18 maintenance contractors, and 18 designers in the Saudi construction industry. The research resulted in 19 factors that impact the relationship between different construction parties, five of which was ranked very high as they have a severe effect on the relationship and could lead to the relationship's end. These factors are: "violating conditions of the contract", "owner's low budget for construction relative to requirements", "delay in progress payment by owner", "poor quality of work", and "accuracy of the project cost estimate".

Violating the conditions of the contract was ranked the most influential factor, in contrast to [Al-Hammad \(1993\)](#), where delays in payments ranked as the highest factor that leads to disputes between the construction parties. The subcontractor may choose not to adhere to the agreed contract conditions, either because it is too costly, or takes more time, which could be through the subcontractor's use of poor materials or not following the agreed standards. The second ranked factor was the owner's low budget for construction relative to requirements, which states that owners or contractors demand high quality projects with low costs, therefore, subcontractors cannot meet that expectation which creates a serious conflict between the involved parties. The third factor was payment delays by owners, which is considered to influence all parties as it impacts their financial plan and as a result leads to work delays. Poor quality of work was ranked the fourth, which differs to [Al-Hammad \(1993\)](#), where it was ranked the second most influential factor of contractor-subcontractor relationships. The poorly performed work of the subcontractor may affect the whole project and as a result leads to interface problems which creates serious disputes ([Al-Hammad, 1993, 2000](#)). The last important factor that greatly impacts the relationship is the accuracy of the project cost estimate, because the poor estimation of the cost reduces others' ability to complete the work, leading to conflicts due to delays of task delivery.

Building on Al-Hammad's work, [Huang et al. \(2008\)](#) examined the effect of 19 factors on completion and quality of the construction projects and added 9 more factors that influence the project progress, such as limited personal experience and an "increase of the uncertainty and ambiguity of interface conflict". Their research found that experience and coordination factors have a critical impact on the project's progression. Experience factors include problems such as the owner demanding high requirements with a low budget, poor estimation of the project costs, and lack of ability in solving technical problems. Coordination factors include poor scheduling and lack of information. Looking to both research, it can be concluded that the factors that influence the relationship be-

tween construction parties also have an impact on the project's performance.

Later research also studied the major factors that cause problems between the contractor and subcontractor in the construction industry such as [Enshassi et al. \(2012\)](#). They distributed 150 questionnaires to 57 contractors and 57 subcontractors in order to obtain their viewpoints on the most important factors that affect their relationship. The result of their research shows that there are 53 factors that most affect the contractor-subcontractor relationship, and 21 factors caused by the contractor, including "assigning part of the work to a new subcontractor without informing the original subcontractor", "the main contractor's financial problems", and "delay in contract progress payments". The research also shows that there are 15 factors that influence their relationship caused by the subcontractors, such as "non-adherence to the conditions of the contract", "delay of the works behind the time schedule", and "lack of quality construction work". However, both parties agreed on the top ten factors that cause problems between them. The top six factors will be discussed as they have matched other studies. The first factor is assigning part of the work to a new subcontractor without informing the original subcontractor, which both parties ranked as the biggest cause of conflict, which agrees with [Huang et al.'s \(2008\)](#) research that states a lack of communication may lead to conflict between contractors and subcontractors. Moreover, [Moore et al. \(1992\)](#) states that a lack of communication and trust may mean both parties adopt an adversarial relationship type which limits their cooperation. The second factor was the main contractor's financial problems, because it impacted the subcontractor's cash flow and could lead to a delay of the completion date and affect the project's overall quality. The research results agree with [Al-Hammad \(1993\)](#) who found that contractor financial problems are one of the largest factors that can cause problems between the contractor and subcontractor in the Saudi Arabian construction industry. "Non-adherence to the conditions of the contract" was ranked the third factor that causes problems between both parties. This agrees with [Al-Hammad \(1993\)](#), and [Huang et al. \(2008\)](#), who found that this factor is one of the main causes of problems between the contractor and subcontractor.

The fourth factor that causes serious conflict between the contractor and subcontractor is "delay in contract progress payments". For the same reason as contractor financial problems, this factor impacts the ability of the subcontractor to pay its labourers and suppliers, which may lead to project delays ([Enshassi et al., 2012](#)). This factor is also recorded by other researchers as a major factor that affects the contractor-subcontractor relationship ([Al-Hammad 1993, 2000](#); [Huang et al. \(2008\)](#)). The fifth factor that is believed to have an effect on contractor and subcontractor relationships is delays of work by the subcontractor. This is because work delays might lead to financial consequences and can also impact the reputation of both parties ([Enshassi et al., 2012](#)). This factor has also been found to be an important factor in other studies such as ([Al-Hammad 1993](#); [Huang et al., 2008](#)). Finally, lack of quality was ranked as the sixth factor that causes prob-

lems between the contractor and subcontractor, because poor quality may lead to rework and as a result can delay the project and impose extra costs, which every construction company prefers to avoid (Enshassi et al., 2012). This factor was also ranked as the second most important factor by Al-Hammad (1993), which leads to serious conflict and may also lead to relationship termination. Moreover, Huang et al. (2008) states that lack of work quality is often associated with lack of experience.

McCord and Gunderson (2014) studied the contractor-subcontractor relationship with the purpose of identifying which factors were most important to the relationship from the subcontractor's viewpoint. They interviewed 24 subcontractors and asked them to rank the top three factors that affect the relationship, and to name which is most likely to end the relationship. The study outlined 17 factors that affect the contractor-subcontractor relationship from the subcontractor's perspective. Some of these factors were not mentioned or ranked as high factors by the other studies, such as bid shopping, project manager relationship, and superintendent capability. Bid shopping was ranked the highest important factor among all factors, and was also mentioned as the most important factor that may lead to relationship termination by all subcontractors. Around 75% of subcontractors stated they have previously terminated a relationship with a main contractor because of bid shopping practices.

The second factor was project manager capability and fairness, because the project manager plays a major role in facilitating information sharing and promoting coordination, which enables the subcontractors to perform their work effectively (McCord & Gunderson, 2014). Around 40% of participants mentioned that they have signed a contract only because of their positive relationship with a project manager. However, 46% of subcontractors stated that they would increase their bid price for a poor project manager and 20% of respondents cited that they have ended their relationship with the main contractor because of this factor. Superintendent capability was determined to be the third most important factor by the subcontractors, because it is the main point of contact and they are the person who subcontractors deal with on a daily basis. About 40% of subcontractors stated that they have bid on a project only because of their relationship with the assigned superintendent. Moreover, around 50% of respondents stated that they would alter their bid price based on superintendent capability. Similar to other studies, payments were also a factor identified by subcontractors as elements that impact their relationship with the main contractor. All subcontractors stated that they have experienced late payments by the main contractor. However, many have shown a high level of loyalty to their contractor and will tolerate late payments (McCord & Gunderson, 2014). In addition, around 20% of respondents mentioned that they would change their pricing by increasing the price for late payers and reducing their price for quick paying contractors. This factor was ranked by subcontractors as the second factor after bid shopping that can end the relationship. Indeed, around 62% of respondents stated that they

have ended their relationship with their contractor in the past because of slow payments, which suggests that it is an important factor in maintaining good relationships with the subcontractor.

Okunlola (2015) studied the interface problems between the contractor and their subcontractor and looked at the effects of these problems on project duration. The study surveyed a total number of 74 contractors and subcontractors in the Nigerian construction industry. In terms of problems caused by the main contractor, the results revealed that contractor financial problems were rated as the first cause of interface problems by both parties, which agrees with some of the previous studies such as Al-Hammad (1993) and Enshassi et al. (2012). Moreover, the result also shows that subcontractor work stopped several times when the subcontractor did not receive their payments, which may lead to project delays. The second highest important factor was “assigning part of the works to new sub-contractor without informing the original sub-contractor”. This result agreed with the findings of Enshassi et al. (2012) and Huang et al. (2008), who state that this factor is one of the most important factors that lead to interface problems, because it is perceived by subcontractors as a violation of agreements and as a result promotes a lack of cooperation and trust. The third cause of interface problems caused by the main contractor is delays in payments. This factor was also found to be a major cause of conflict in most of the previous studies such as Al-Hammad (1993), Enshassi et al. (2012) and McCord and Gunderson (2014) because it affects the subcontractor’s cash flow and the ability to pay workers, and as a result impacts their ability to continue with the project (see Table 1).

For problems caused by the subcontractor, the results show that the most important cause of problems was delay of work by the subcontractors as agreed by both parties. This agrees with Enshassi et al.’s (2012) findings that delay is a major cause of problems as it in turn delays the whole project. Both parties ranked ‘neglecting the instruction of the main contractors’ as the second most important factor. Ignoring contractor’s instructions could be perceived as a violation of agreements which might lead to rework and delays. This factor has not been mentioned as a major cause of interface problems by previous studies. However, it was mentioned by Enshassi et al. (2012) as the fifth major cause of problems between contractor and subcontractor by both parties. Assigning part of the work to another subcontractor without the main contractor’s knowledge was considered to be the third major cause of problems between the contractor and the subcontractor. This action displeases the main contractor as they did not assess this subcontractor’s previous works as well as the possibility of quality issues.

All in all, most of these studies identified the factors that affect the contractor-subcontractor relationship through reviewing the literature and statistical tools rather than using an in-depth interview, which allows the researchers to explore more issues and to gain profound understandings, rather than just capturing statistical numbers. It is important to identify and rank the factors that

**Table 1.** Top five factors affecting contractor-subcontractor relationships (Both Perspectives).

Al-Hammad (1993)	Al-Hammad (2000)	Huang et al. (2008)	Enshassi et al. (2012)	McCord and Gunderson (2014)	Okunlola (2015)
Delay in contractors processing payments,	Violating conditions of the contract	Experience factors: include problems such as the owner demanding high requirements with a low budget, poor estimation of the project costs, and lack of ability in solving technical problems	Assigning part of the work to a new subcontractor without informing the original subcontractor	Bid shopping	Main contractor financial problems
Lack of quality construction work,	Owner's low budget for construction relative to requirements		Main contractor's financial problems	Project manager capability	Assigning part of the works to new sub-contractor without informing the original sub-contractor'
execution errors,	Delay in progress payment by owner		Non-adherence to the conditions of the contract'	Project manager fairness	Delays in payments
Delay in shop drawings and/or sample material approval	Poor quality of work	Coordination factors: include poor scheduling and lack of information	Delay in contract progress payments	Superintendent capability	Delay of work by the subcontractors
Scheduling conflicts between the contractor and the subcontractor	Accuracy of the project cost estimate		Delays of work by the subcontractor Lack of quality	Timeliness of Payments	Neglecting the instruction of the main contractors Assigning part of the work to another subcontractor without the main contractor's knowledge

affect the contractor-subcontractor relationship in the Saudi construction industry to avoid disputes, delays, and cost overruns, and to maintain healthy relationships. Therefore, this research will use a different methodological approach: the case study approach, to identify the factors affecting the Saudi construction industry, and to explain the impact of these factors on contractor-subcontractor relationships.

### 3. Research Methodology

The purpose of this research is to study the perceptions surrounding contractors and subcontractors in the Saudi Arabian construction industry. It aims to determine the factors that affect the relationship between these parties. This section outlines and justifies the methodology used (see **Figure 1**).

*Collis and Hussey (2009)* define methodology as the “overall approach to the entire process of the research study”. *Saunders et al. (2012)* views the research methodology as an onion, where some layers have to be “peeled away” before answering the research questions. These layers are the research philosophy, approach, methodological choice, strategy, time horizon, and techniques and pro-

cedures (Figure 2). These stages are essential elements of determining the research methodology for a particular research area. Despite the fact that there are other classifications and categorisations of these stages, this research used Saunders et al.'s (2012) classifications as it provides a clear and explicit guideline to identify the applicable methodology to answer the research questions.

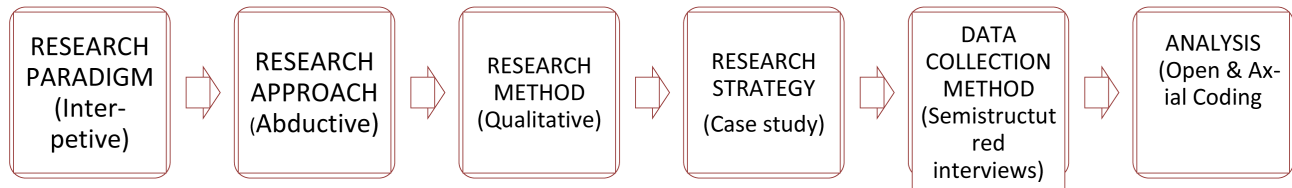


Figure 1. Research methodology.

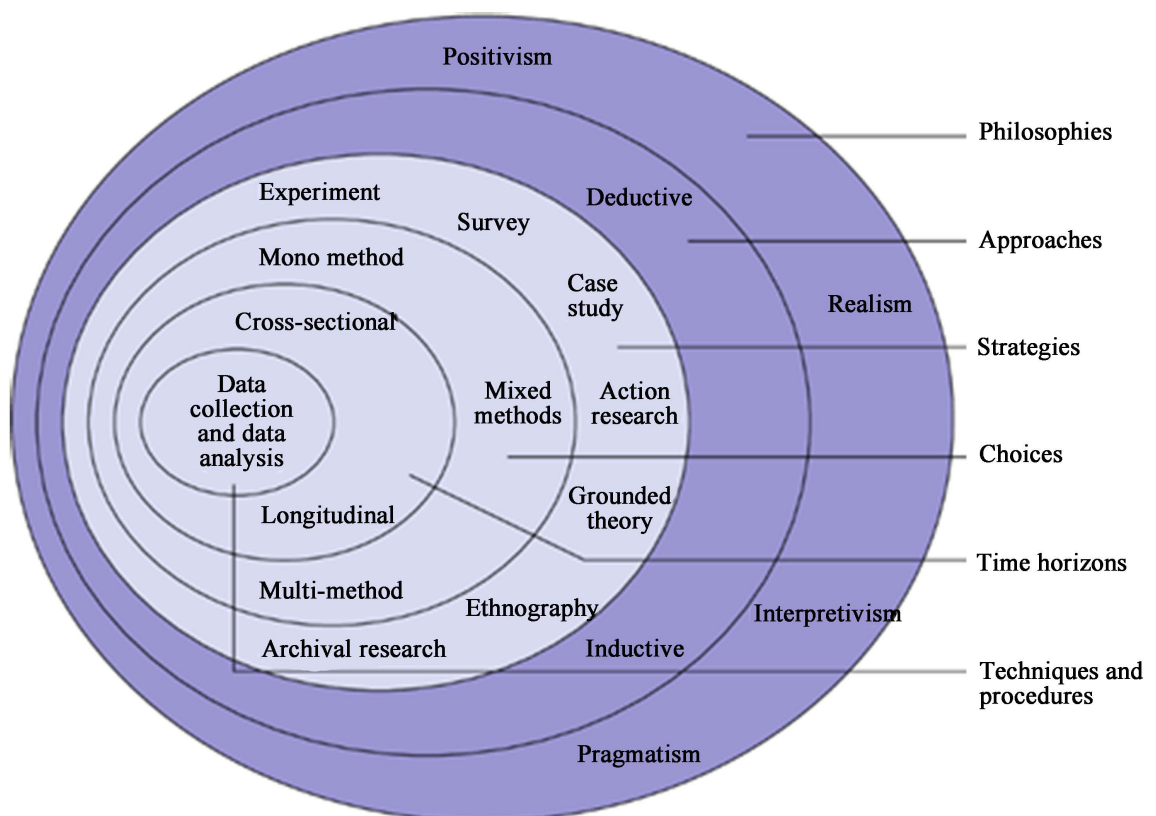


Figure 2. The research onion by Saunders et al. (2012).

### 3.1. Research Philosophy

The first layer of the “research onion” is the research philosophy. There are two research paradigms that dominate the social sciences. These are interpretivism and positivism philosophies (Veal, 2005: p. 24). This research adopted the interpretivist view, because this view holds the belief that reality is multiple and socially constructed, meaning it may change from one context to another. This view contrasts with the philosophy of positivism, which has a single view of reality and assumes that it is consistent. According to Black (2006), the interpretivist

approach has a strong and powerful ability to understand the complexity and meaning of a phenomenon. Additionally, it also helps in understanding the social context of a phenomenon and how it can influence and be influenced by its social environment (Rowlands, 2005).

### 3.2. Research Approach

The second layer of the research onion is the research approach. According to Saunders et al. (2012), there are three types of research approaches. These approaches are deductive, inductive, and abductive. The deductive approach is concerned with developing a set of hypotheses to test an established theory. Such an approach is widely used in natural sciences, where explanation is based on laws that predict the occurrence of a phenomenon and try to control it. An inductive approach is concerned with generating theory based on the data collected from the field. This approach is often associated with a qualitative method. The findings from a small sample are used to make generalisations as well predict new findings. This is in contrast with the deductive approach, which is locked by the developed hypotheses and new knowledge cannot be used. The third approach is the abductive approach, which is a combination of the two earlier approaches to overcome their weaknesses, which are the ambiguity of choosing a theory to be tested through creating hypotheses for the former approach, and the lack of data to build a theory by the second approach. This approach aims to generate a theory or modify an existing theory by using the data collected to explore phenomena and use these data to identify themes and patterns, placing them in a conceptual framework and testing it by collecting new data. Saunders et al. (2012) argues that the choice of the research approach depends on many factors, such as the amount of existing literature. A topic that is widely covered by existing literature is likely to apply a deductive approach, as it enables the research to produce hypotheses and test an existing theory. However, a topic that is new and has little pre-existing literature is more likely to follow an inductive approach, to generate and analyse data to build a theory. A topic that has been covered widely by literature, but has little literature in the research context is more likely to adopt an abductive approach, as it will enable the research to modify an existing theory to fit that particular context. Therefore, for this research, an abductive approach was followed, as little research has been previously conducted in the Saudi context.

Easterby-Smith et al. (2008) argue that the choice of the research approach is important for three reasons. Firstly, it allows the researcher to select the appropriate design to answer the research questions. Secondly, it helps the researcher understand which strategies and choices are best for this particular research. For instance, for research that seeks to understand why something is happening rather than what is happening, an inductive approach may be the most appropriate method. Finally, understanding the difference between different approaches allows the researcher to adjust the research design to overcome constraints. Pri-

or knowledge of different research approaches enables the researcher to adapt a research design that can cope with constraints.

### 3.3. Research Methods

The third stage is the methodological stage, where the researcher can follow either the mono method or the mixed method. The mono method uses either a quantitative or qualitative method, and the mixed method a combination of the two. The mixed method is considered to be superior to the mono method as it overcomes the weaknesses of the mono method and provides more reliable findings (Saunders et al., 2012). The quantitative and qualitative methods refer to a number of techniques that the researcher uses to collect and analyse data. Quantitative research naturally relies on statistics and figures to measure variables, as well as the relationship between two or more variables, and uses techniques such as questionnaires (Saunders et al., 2012). The qualitative method is more about gaining an insight into a phenomenon by understanding the meanings that participants attach to phenomena, and uses different collection techniques such as interviews and focus groups (Saunders et al., 2012). For this research, the qualitative method has been found to be the most suitable method because 'qualitative research is associated with an interpretive philosophy' (Denzin & Lincoln, 2005, cited by Saunders et al., 2012). This method is interpretive, because the researcher is involved in the research and needs to make sense of meanings expressed by the participants. Furthermore, this method is appropriate for studying the contractor and subcontractor relationship from a real-world context, as it allows the researcher to understand the nature of the relationship from their point of view. According to Denzin and Lincoln (2005), an advantage of applying qualitative research in social science is that it explains how social experiences are created, and provides an illustration of how this experience within a particular context has been created, making it visible. This method was found to be superior to the quantitative method because it enables the researcher to understand both parties' perceptions of their relationship. For example, this includes how each party defines trust and commitment in their relationship, which cannot be captured through a quantitative approach. Moreover, it is noticeable from the literature review that most of the research used quantitative methods, which only capture statistical findings, rather than an explanation of the meanings of that finding.

### 3.4. Research Strategy

Research strategy is the fourth layer of Saunder's research onion (Saunders et al., 2012). Research strategy is an important stage in moving forward through the research, as it determines the technique of data collection with regards to the research objectives and questions with the time and resource availability (Saunders, Lewis, & Thornhill, 2007). According to Saunders et al. (2012), there are a number of research strategies that a researcher can follow to conduct research, such

as a case study, survey, experiment, action research, and archival study. In this research, the case study strategy was found to be the most suitable method to answer the research questions, as it provides insight and profound understandings to the studied issues (Eisenhardt & Graebner, 2007). Moreover, the case-study strategy was found to be superior to the other strategies as it enables the researcher to explain and explore new issues within the construction industry because of its ability to answer “why” and “how” questions (Yin, 2003). Additionally, this strategy has the ability to investigate a phenomenon within a real-life context, particularly when the boundaries between an issue and its context are not sufficiently clear (Yin, 2009). Moreover, Proverbs and Gameson (2008) state that a case study is the most appropriate strategy through which to study an industry such as the construction industry because it involves different types of firms and organisations. They also state that the application of case study strategy in the construction industry is limited, which agrees with Dainty’s (2008) identification that the quantitative research method is the dominant method within the field. Studying the contractor-subcontractor relationship requires such a strategy because the buyer-supplier relationship has unclear boundaries. Therefore, it needs elaboration on certain issues, such as trust and commitment, to allow the researcher to understand the issue from both parties’ point of view.

Using Yin’s (2009) classification of a case study, the research used multiple case studies. They are multiple because the study focuses on more than one company (Yin, 2009). The rationale behind using multiple case studies is to compare and contrast the findings from different cases, and to identify whether literal replication can be achieved (Saunders et al., 2012). The multiple cases were applied to identify a common pattern across cases, to increase the “generalisability” of the findings (Miles & Huberman, 1994).

The research was conducted on four construction companies that specialise in infrastructure development. The first company is the main contractor (C1), and the other three firms are its subcontractors (S1-S3). All respondents are located in the city of Jeddah, Saudi Arabia. The number of cases was determined according to Eisenhardt’s (1989) argument that the maximum number of case studies should not exceed seven because a person cannot mentally process more than this number. The qualitative approach uses non-probability sampling techniques, including purposive and snowball sampling methods. For this research, the purposive selection method was used. The selected companies were chosen mainly because they operate in the same industry, and have worked together for a long time. Thus, knowledge and experience will provide rich information and valuable findings for this study.

### 3.5. Data Collection

There are a number of techniques that qualitative research uses to collect data or information, such as interviews and focus groups. The semistructure interview method is appropriate for studies that aim to explore new issues or explain

**Table 2.** Top five factors affecting contractor-subcontractor relationships (Both Perspectives).

Companies	Years in business	Number of projects with C1	Employees
Contractor	40 years		3000
Subcontractor 1	9 years	10 projects	200
Subcontractor 2	11 years	24 projects	500
Subcontractor 3	7 years	6 projects	100

phenomena (Saunders et al., 2012). Therefore, the data for this research was collected through semistructured interviews, allowing the researcher to have some flexibility to explore new issues and identify the uniqueness of each relationship. Twelve interviews were conducted in total, three with the main contractor and three with each subcontractor. Participants involved are project managers, commercial managers, business owners, members of top management, and employees involved in the supply chain. The interview lasted between 30 and 45 minutes, and was conducted via Skype due to the geographical distance between the researcher and the respondents. A follow-up phone call was used to either gain more information or clarify issues.

To identify the factors that affect contractor and subcontractor relationships. Both the contractor and subcontractors were asked to state the five most important factors that affect their relationship from their point of view, and were asked to rank each of these factors in terms of importance and power to end the relationship. Participants were then asked specifically about the importance of the factors extracted from the literature review, which are payments, quality, and so on.

Several problems were encountered during the data collection phase. The first issue was that the respondents were very reserved when providing the researcher with some of the key information because of the main contractor's power. However, the research managed to overcome this challenge by gaining the trust of the participants, particularly by declaring full confidentiality of the information given. The second issue was that participants had busy schedules, thus interviews had to be re-scheduled a number of times.

### 3.6. Reliability and Validity

Despite the stated advantages of using case study Case study strategy as research design it has a number of limitations that worth to acknowledge. Case study has been widely criticised for its bias of case selection which influences the findings and conclusion of the research (Yin, 2003). It also has been criticised for its inability to generalise the findings because it uses small number of subjects, particularly for single study (Yin, 2003). Moreover, case study has also been criticised for its lack of rigour and biased interpretation of data by the researcher (Yin, 2003).

However, there are two arguments on how to overcome these limitations and

to judge the quality of qualitative research. Yin (2009) argues that the qualitative method can be validated using the same criteria as the quantitative method, because the outcome credibility is central to all research. Others such as Lincoln and Guba (1985) argue that the quality of the research can be enhanced by different criteria, such as credibility, transferability, dependability, and confirmability. For this research to ensure the data validity, the researcher used Yin's (2009) approach for validating qualitative data. Yin (2009) provides four tests to ensure rigour, which are constructed validity, internal validity, external validity, and reliability. Constructed validity is about identifying the right measurement for the concepts being studied. The concepts of this research are identifying the nature of the relationship between the contractor and their subcontractors, and identifying the factors that affect their relationship through the five dimensions and the top five factors that influence the relationship, which has been previously stated. Internal validity is about identifying a relationship between two variables where one leads to the other. According to Yin (2009) this validation criteria is only applicable for explanatory studies, and not for exploratory or descriptive studies. External validity is concerned with the generalisation of the findings to other firms or countries. Therefore, to be able to generalise the findings of this study, the findings were replicated between the cases to increase the external validity. Reliability is concerned with presenting the research process, so it may be replicated by other researchers to produce the same findings. To increase the reliability of this research, the data collection techniques and the investigation process were explained step by step for future researchers that may seek to replicate this study.

## 4. Findings

Participants were asked to list all the factors that affect their relationships and then state the five most important factors from their perspectives. The factors that affect the contractor-subcontractor relationship in the Saudi construction industry are summarised below.

### 4.1. Factors from the Contractor Perspective

The results of the interviews demonstrate that participants from the main contractor and its subcontractors have different perspectives on the factors that affect their relationship, as well as the importance of these factors on influencing their relationship (see Table 3 and Table 4). From the main contractor's perspective, the first factor identified was subcontractor work that was behind schedule. All contractor participants agreed that this was the most important factor to influence the relationship with subcontractors, as it impacts their reputation, and may lead to less project work in the future, as well as financial penalties imposed by the client. The second most important factor was subcontractor violation or non-adherence to the condition of the contract. As stated by the contractor, violation of the contract could be the result of either the subcontractor

**Table 3.** Factors influencing the contractor-subcontractor relationship (contractor's perspective).

Factors	Rank
Delay of work behind the time schedule by the subcontractor	1
Violation or non-adherence to the condition of the contract	2
Neglecting the instructions of the main contractor	3
Lack of quality construction work	4
Lack of necessary equipment or machinery from the subcontractor	5

“cheating” to finish work on time, or failing to understand some of the contract elements. For example, when the subcontractor assigns part of the work to another subcontractor that has less competence and capability, without the knowledge of the main contractor. The impact of such behaviour may influence the trust between the main contractor and the owner of the project, resulting in fewer projects assigned to the main contractor. The third most important factor influencing the contractor-subcontractor relationship, from the contractor's perspective, is that of disregarding the instructions of the main contractor. Neglecting the contractor's instructions, as stated by participants, is often associated with safety and wastage issues. Two examples provided by the main contractor illustrate the concern: when a subcontractors' labourers do not wear the correct safety uniform; and when labourers leave some construction waste on sites, such as oil bottles and machinery parts. Such issues impact the main contractor's reputation and financial capacity; they have to ensure full safety of labourers to prevent incidents that impact their reputation, and pay extra costs for clean-up of the construction site.

The fourth most important factor that was identified by the contractor was lack of quality construction work. This factor was ranked fourth because is the result of the two previous factors: non-adherence to the contract and neglecting the main contractor instructions. Lack of quality work causes conflict between the contractor and subcontractor, due to the required rework of defects and the resulting delays to the project schedule, never mind the extra costs that occur from the rework. This issue is not favoured by any of the projects parties, as it has great consequence on collective reputation and financial solvency.

The fifth most important factor was the absence of enough equipment or machinery used by the subcontractor. The contractor identified this as a cause of conflict between both parties, because using less machinery than agreed is a cause for the project to fall behind schedule. Therefore, as stated earlier by the contractor participants, project delays impact the company reputation, which gives competitors the advantage to take projects from them.

#### 4.2. Factors from the Subcontractors' Perspective

The results from the interviews revealed that there is an agreement on a number

of factors that cause conflict between both contractor and subcontractor parties. However, subcontractors differ in their evaluation of the importance and power of these factors (see **Table 4**). All subcontractors agreed that the delay in payment as the contract progresses was the major cause of conflict between the main contractor and subcontractors. Interviewees stated that:

We [are] always in a dispute with the main contractor about payment issues, our project manager would visit their headquarters several times to ask for the payments and sometimes before it is even due just to keep them aware. (S1)

We have never received payments on time, but we have [the] financial ability to keep the work going until they pay us. (S2)

The delay in payment impacts the project progress as we have weak financial ability and we cannot survive without the contractor payments, so most of the time we are forced to stop the work until they pay. (S3)

All subcontractor participants agreed that the second most important factor influencing the relationship is related to the financial problems of the main contractor. They have stated that the contractor's financial ability is very important to them, preferring not to work with a contractor that has a weak financial capacity (or financial issues); it would impact on business and result in losing the opportunity to bid for other projects. Most of the participants stated that the third highest cause of conflict between both parties is the assignment of part of the project work to a new subcontractor without informing the original subcontractor. This emerged as a cause of serious conflict between both parties, such that it indicates the subcontractor is lacking competence. It also causes conflict between different subcontractors on the same site.

**Table 4.** Factors influencing the contractor-subcontractor relationship (subcontractor's perspective).

Factors	S1	S2	S3
Delay in contract progress payment	1	1	1
Main contractor financial problems	2	2	2
Assigning part of the work to a new subcontractor, without informing the original subcontractor	3	7	3
Interruption and/or termination of work by contractor	4	5	4
Project manager relationship and capability	5	4	5
Superintendent capability	7	5	6
Scheduling conflicts	6	8	7
Delay of the main contractor in approving the work	8	7	8

The fourth most important factor that most of the subcontractors agreed upon was the interruption and/or termination of work by a contractor. Many

subcontractors have stated that they have experienced such problems, causing great impact on their relationship with the contractor, with the possibility that it leads to relationship termination. Participants from S1 stated that every time the main contractor interrupts the work, they delay the completion of the project further; sometimes this interruption is for unimportant reasons. Moreover, participants from S3 have stated that the main contractor sometimes interrupts part of the project to switch resources to another section, which causes a scheduling conflict. Participants from S2 stated that the main contractor does not usually interrupt their work, because of the long-standing work relationship by which the subcontractor is aware of standards and measures. On occasion, the contractor adds new specifications to the project and this causes interruption to the work. To conclude, the fifth factor that influences the contractor-subcontractor relationship is the project manager's rapport and capabilities. All participants have agreed on the importance of having a good relationship with the project manager, and the importance of the project manager's competence for the project's success. All subcontractors stated that they have worked with either a bad or incompetence project manager. A participant from S2 stated:

We try to get the project manager on our side, as we know that he could be a nightmare for our current and future projects.

An interviewee from S3 explained:

On one occasion we were about to end our relationship with the main contractor because of the project manager's behaviour and lack of competence.

From the main contractor's point of view, the factors that affect the relationship between contractor and subcontractor are: delay of work behind the time schedule by the subcontractor, violation or non-adherence to the condition of the contract, neglecting the instructions of the main contractor, lack of quality construction work, and shortage of enough equipment or machinery used by the subcontractor. Conversely, from the subcontractor's perspective, the factors influencing contractor-subcontractor relationship include: delay in contract progress payments, main contractor financial problems, assigning sections of the work to a new subcontractor (without informing the original subcontractor), interruption and/or termination of work by the contractor, and project manager relationship and competency.

## 5. Discussion

The five most important factors that cause interface problems between the primary contractor and its subcontractors—from both perspectives—were identified in the previous section. Thus, the aim of this section is to discuss these factors by comparing and contrasting the research findings with previous studies, to highlight differences in the results.

### 5.1. Causes of Problems by Subcontractors

For problem factors that are directly caused by subcontractors, the first most important factor was the delay of work behind schedule. This factor was ranked at first position because it has serious consequences for all construction parties, particularly for the main contractor, as it involves financial penalties and a loss of reputation that may jeopardise future projects bids. Enshassi et al. (2012) and Okunlola (2015) confirm the importance of this factor, ranking it at a high position in term of its impact on relationship and emphasising that it is the cause of serious disputes between a main contractor and its subcontractor.

Violation or non-adherence to the condition of a contract was ranked as the second most important factor. This factor is considered a cause of serious conflict because it impacts on the trust between all construction parties. This finding is in agreement with Al-Hammad (1993, 2000), Huang et al. (2008), and Enshassi et al. (2012), who rank this factor at a high position and emphasise that it leads to conflict between contractors and subcontractors.

The third cause of problems attributed to subcontractors was the neglect of instructions received by the main contractor. This factor could be a result of poor communication between both parties. It was found to be a cause of serious disputes, as it may involve the main contractor paying extra costs for rework or safety issues. This finding agrees with Al-Hammad (1993), Enshassi et al. (2012), and Okunlola's (2015) results. However, the factor was only ranked highly by Enshassi et al. (2012), who emphasise that poor communication and the disregard of instructions is a cause of serious problems between contractors and subcontractors.

The lack of quality in construction work was the fourth cause of conflict between the primary contractor and its subcontractors. This factor was found to cause problems between construction parties because it meant the work had to be re-done. Rework adds extra costs and potentially results in delays to the project schedule which leads to project delays which is the first factor that causes disputes between contractors and subcontractors. These findings are supported by Al-Hammad (1993, 2000) who ranks this factor as the second and fourth cause of conflict between contractors and subcontractors. Huang et al. (2008) attributes this absence of quality to a lack of experience in the subcontractors. Poor quality also ranks in a high position in recent studies. For example, Enshassi et al. (2012) rank this factor at fourth position, emphasising that it leads to serious conflict, possibly resulting in project delays, and Okunlola (2015) ranks this factor as the seventh highest cause of conflict for both parties.

The fifth cause of interface problems between the contractor and its subcontractors was the lack of equipment or machinery used or owned by the subcontractor at site. This may be for several reasons: the subcontractor is involved in more than one project a time; some of the machinery broke during the project; or the subcontractor has a financial limitation that hinders the appropriate amount of machinery for the project. Conflict occurs between the construction

parties because the absence of equipment can slow the progression of the project, which may impact the primary contractor's reputation and lose future projects. [Enshassi et al. \(2012\)](#) rank this equipment-related factor at eleventh position, signalling that it is an intermediate concern. That it is not more highly ranked could be because most general contractors assess their subcontractors' capability before assigning the work so as to ensure resource availability.

## 5.2. Causes of Problems by Contractors

For problems caused by the primary contractors, the most important factor was identified as delays in contract progress payments. All respondents ranked this factor in a high position due to the impact it has on their ability to continue working. Subcontractors need cash flow for labour and material costs. Therefore, a delay in payments results in work stoppage and project delays, obviously not preferred by the primary contractor. This result is supported by [Al-Hammad \(1993\)](#) who ranks this factor as the most important cause of conflict between contractors and subcontractors. The factor is ranked by [Enshassi et al. \(2012\)](#) as the third most important of cause of interface problems by both parties. [McCord and Gunderson \(2014\)](#) rank payment delays as the second most important factor that leads to relationship termination, because of the heavy impact on subcontractors' daily operations. However, if the subcontractors have strong financial solvency this factor may not lead to relationship termination; but subcontractors do tend to avoid bidding to contractors with poor payment histories ([McCord & Gunderson, 2014](#)). Moreover, [Okunlola \(2015\)](#) highlights that this factor is a major cause of conflict and was rated by both parties as the third most important cause of problems.

The second most important factor was the primary contractor financial problems. This is found to be a cause of conflict as it impacts the subcontractors' cash flow and delays the project progress. It leads to an adversarial type of relationship. This issue could be attributed to poor estimation of project cost, poor management, or delays in progress payments unpaid by the owner ([Al-Hammad, 1993](#)). This finding agrees with [Al-Hammad \(1993\)](#) who ranks general contractor financial problems in a high position in the causes of conflict between contractor-subcontractor. This factor is ranked by [Enshassi et al. \(2012\)](#) as the second most important factor, and by [Okunlola \(2015\)](#) as the first cause of contractor-subcontractor problems; both highlighted the criticality of such a factor. [McCord and Gunderson \(2014\)](#) rate this factor as the fourth cause of relationship termination and reported that 20 percent of participants ended their relationship with their main contractor because of financial difficulties.

Assigning sections of project work to a new subcontractor, without informing the original subcontractor, was ranked as the third-highest cause of problems between contractors and subcontractors. This factor was considered by both groups to be the first cause of conflict as it leads to poor cooperation, mistrust, and poor communication. These struggles hinder any collaboration efforts,

which may result in opportunism and projects delays. Moore et al. (1992) state that these elements also encourage an adversarial type of relationship between contractors and subcontractors. The findings are backed by Enshassi et al. (2012) who ranked this factor as the first cause of conflict between the main contractor and its subcontractors. In addition, Okunlola (2015) asserts that this factor is considered the first cause of interface problems by subcontractors, and the second by both groups.

The fourth factor that most affects the contractor-subcontractor relationship is interruption and termination of work by the contractor. This factor was found to cause either stoppage of work or the switching of resources to other parts of the project (or fixing defects/performing rework). Both interruption and switching of resources leads to delays in work completion; subcontractors thus spend more days on the project and lose the opportunity to bid for new projects. This finding agrees with Okunlola's (2015) result; rating as the sixth-most important cause of conflict between contractor and subcontractors. However, it was ranked at twelfth and fifteenth by Al-Hammad (1993) and Enshassi et al. (2012) respectively, therefore considered by these authors as a moderate cause of conflict.

Project manager relationship and capability was considered to be the fifth most important factor in contractor-subcontractor relationship. This factor was considered as an important factor because the project manager is responsible for guiding subcontractors to meet project specifications, and facilitate coordination and information flow between various construction parties. In addition, the project manager may in fact be the most important person involved in the project; the manager is the main point of contact between all parties, as well as the person who approves subcontractor work. Therefore, a bad relationship with the primary contractor's project manager could cause many problems for the subcontractors: delays to work completion, less projects secured in the future, and withholding of payments. This factor was only found to be an important factor in McCord and Gunderson (2014), who have emphasised the importance of project capability and fairness to a healthy relationship between contractors and subcontractors. Moreover, this factor was ranked as the second most important factor and the fifth cause of relationship termination by subcontractors (McCord & Gunderson, 2014).

In summary, by comparing and contrasting the findings of the research with the previous studies examined in the literature review sections, it can be stated that there is some similarity with some of the previous studies. For example, it seems that the all the factors were found by the researchers were mentioned by previous researches and in particular it is more similar to the studies of Enshassi et al. (2012) and Okunlola (2015).

## 6. Conclusion

The main purpose of this study is to examine the factors affecting their relation-

ship. This section summarises the outcome of the research, as well as discussing the research's significance and limitations.

The factors that affect the contractor-subcontractor relationship from both perspectives; it appears that all the factors found in this research were mentioned in previous studies. Thus, there are no new factors identified as unique to the Saudi construction industry. However, the order of importance of these factors was slightly different than found in previous studies. There is some similarity to the studies of [Enshassi et al. \(2012\)](#) and [Okunlola \(2015\)](#); possibly as both studies were conducted in emergent market economies that have similar cultures to the studied country.

This research has significant importance for both practitioners and academics. First, the research will contribute to the buyer-supplier literature by providing a dyadic study and showing how the buyer and supplier have different views about the same relationship. Moreover, few studies have been conducted on the buyer-supplier relationship in the construction industry in general and none have been conducted on Saudi Arabia's construction industry. Thus, the research will enrich the knowledge of those interested in the Saudi construction industry.

This research has made a methodological contribution to the field of contractor-subcontractor relationship by using a case study approach, which has revealed explanations of issues that were not explained by previous studies, as most of this research used a quantitative approach concerned with the identification of issues without explaining the impact of these issues on contractor-subcontractor relationships. For example, this study allowed the participants to explain their definitions of trust and commitments, as well as it allowing the participants to explain the impact of interface problems on their relationships.

The practical contribution this research has made is that its findings will provide useful information for both contractors and subcontractors, such as the factors that affect their relationship. Identifying the factors and their effects on their relationships will enable both parties to act to remove these barriers and obstacles that prevent them from developing a deeper and clearer relationship.

This research, like any other study, has a number of limitations, which are worth acknowledging in order to offer guidance to future researchers on how to overcome these limitations. First, using a case study approach could have impacted on the findings, as the researcher acted as the main instrument of data collection. Therefore, there is some bias in terms of data collection and the interpretation of the results. Thus, a triangulation method is recommended in order to check the consistency of the findings from different methods, such as surveying a number of other subcontractors to increase the validity and the reliability of the findings. The second limitation is that the selected case studies were restricted to the context of the city of Jeddah with Small sample size which restricts the ability to generalize findings to the broader Saudi Arabian construction industry. Thus, while the findings are valuable for this region and this specific industry, future research may need to increase the number of companies

and select companies from different regions and industries in order to develop more comprehensive findings. Finally, the findings of this research might have been influenced by the falling oil price. The drop in oil price might have impacted the relationship between the companies, as uncertainty increases when oil prices decrease because the government is the major client for most projects, and as a result most projects stop.

In this study, the focus of this research has been on gaining insight into the factors affecting this relationship. For future research, it is recommended that a study of the barriers and obstacles that prevent the developments of collaborative and long-term relationships between the contractors and their subcontractors should be included.

Practitioners are recommended to pay attention to factors affecting the contractor-subcontractor relationship, both parties need to focus on the top five factors mentioned in the research from both perspectives, and try to minimise the impact of these factors on their relationship, as they might potentially lead to the relationship's termination. The most important factor that the main contractor needs to focus on is the issue of payment delays. This factor has a major impact on contractor-subcontractor relationships from the subcontractors' perspective, as it leads to other issues such as work delays and reduced quality, and as result leads to delays in project deadlines. The most important issue that the subcontractors need to focus on is the problem of work delays that affect the overall schedule. This factor has a number of consequences, including the financial penalties imposed by the main contractor and the impact of these delays on the both parties' reputations, which may lead to less future projects being assigned to the subcontractor due to their reputation for underperforming. This issue could be resolved by firstly submitting a realistic deadline to the main contractor and secondly allocating the right amount of resources to the project.

### Note

This article is based on the author's master thesis (Almutairi, 2016) that was conducted at the Alliance Manchester Business School.

### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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