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Barriers to Partnering Implementation in Sarawak's Construction Industry

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Abstract

Malaysia's construction industry is grappling with partnering issues due to inconsistent collaborations and consensus. Sarawak's construction sector, like many others, faces challenges in effective collaboration due to strained relationships among stakeholders. This hinders the adoption of partnering arrangements that could expedite project outcomes, highlighting the need for improved project performance and professionalism in the construction sector. Hence, the aim of the present study is to examine critical barriers to partnering implementation in the Sarawak construction industry and to recommend strategies that can be adopted to enhance partnering implementation. Probability sampling is a research technique that involves randomly selecting participants from various sectors who have participated in partnering projects. This method ensures high validity, minimizes biases, and aids in identifying future research trends by using descriptive analysis and mean for data analysis. A total of 103 responses were obtained from the professionals' team, including the G5 and G6 contractors, in this research. The duration of the study took about 2 years to be completed. The results show that the most significant barriers to partnering implementation are "lack of open and honest communication", "proper understanding of the concept is lacking", "unwillingness to compromise", and "lack of trust among the participants". Respondents suggest two strategies to improve partnering implementation: resolving communication-related issues in a working team and having a clear understanding of the partnering concept before the project starts. To successfully implement a project, it is crucial for all parties involved to have a comprehensive understanding of the partnering concept beforehand. Addressing barriers in Sarawak can improve governance, community practices, communication, understanding, compromise, trust, resource management, public services, and community ties, contributing to sustainable development. The results provide inspiration and guidance to the construction industry to implement partnership as the preferred approach in future projects.

Keywords: Barriers, Construction industry, Partnering, Sarawak, Strategies

Introduction

Chan, Chan, and Ho (2003) define partnering as a practice that promotes positive working relationships founded on communication, trust, and commitment. Another definition of partnership is a relationship strategy between important contributors, according to Børve, Rolstadas, Andersen, and Aarseth (2017). However, Erikkson (2010) pointed out that the definitions of partnering are too general and vague, which prevents the reader from understanding the essence of the idea. Despite the differences in definitions, research on partnering generally agreed on the following principles:

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commitment, mutual trust, shared goals, and effective communication (Ola-Awo, Amirudin, Alumbugu, & Abdulrahman, 2018).

Partnering has been deemed an essential way to enhance construction project performance and consequently implement success in construction (Bresnen & Marshall, 2000). This practice has also become a trend in many industries in the event of technological developments (Douma, Bilderbeek, Idenburg, & Looise, 2000; Siti, Intan, Faisol, & Soleyman, 2014; Nkeleme, Chukwuni, Nzeneri, Okereke, & Offiong, 2021). Over the last decades, partnering practices have recognized advantages introduced in the construction industry as this kind of long-term collaborative relationship stipulates the innovation chance, distributes possible risk between stakeholders, and abates disputes (Chan et al., 2003; Eriksson, 2010; Faraziera, Emma, & Jamaluddin, 2010).

Malaysia's construction companies, including small businesses in rural areas, have skyrocketed in recent years. In order to become a developed country, the construction industry in Malaysia is striving to engage in this type of risky business to be more competitive (Ali, Mohd-Don, Alias, Kamaruzzaman, & Pitt, 2010) Mirawati, Othman, and Risyawati (2015), state that the construction industry in Malaysia contributes about 3 to 5% of the total gross domestic product (GDP). According to Lim and Liu (2001), international construction partnering projects have gradually emerged and sprouted around the world, especially in developing countries. In Malaysia, construction partnering is also becoming increasingly popular, both with multinational construction companies and the local government. However, a common consensus between the parties has never been implemented.

Just like the construction industry around the world, the Malaysian construction industry also suffers from partnership problems due to inconsistent collaboration and consensus. For example, the poor implementation process of the Masjid Amanah Rakyat (MARA) projects has resulted in work not being completed on time (Memon, Rahman, Abdullah, & Azis, 2011). As time overruns occur in the construction projects, costs are ultimately affected (Evans, Farrell, & Mashali, 2020). In addition, poor communication as one of the partnership problems between the parties leads to a confrontational working environment, thus delaying the projects (Chan, Chan, Fan, Lam, & Yeung, 2008; Yao, Lim, Leong, Lee, & Pek, 2022).

According to the National Housing Department (2013) and Star News Malaysia (2013), they have provided statistics on abandoned projects and project delays caused by partnership issues (Mirawati et al., 2015). For example, the Malaysia External Trade Development Corporation (MATRADE) experienced a 70% cost overrun over a period of about nine years because the original contractor abandoned the project and another was appointed. The second Penang Bridge was also delayed by more than 12 months because additional technical challenges were overlooked in the initial phase. The Sultan Mizan Zainal Abidin Stadium (Terengganu) project saw some RM292 million worth of stadium roof collapses due to design flaws and the use of substandard materials (The Star, 2013). The Puchong Jaya flyover and the Middle Ring Road 2 flyover in Kuala Lumpur also fell into disrepair, as did the collapse of the suspension bridge in Kuala Dipang. The report published by the National Housing Department in April 2013 revealed that 191 private sector projects were classified as “sick” and 30 projects were behind schedule (National Housing Department, 2013).

In the above-mentioned failed projects, the main problems encountered were lack of efficient site management by the contractor, inefficient site coordination, improper planning, financial problems and conflicts with subcontractors (Sambasivan & Soon, 2007; Rahman, Memon, & Karim, 2013). This scenario can be interpreted by the

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incoherent nature of the construction project involving a number of parties, which increases the difficulties in coordinating the project.

According to Wei, Hew, Shih, and Leonard (2019), partnerships in construction projects often encounter communication and collaboration issues that can really hamper efficiency and the achievement of positive outcomes. However, a growing number of partnerships, including the merger of companies in the construction industry, do not necessarily produce the desired results. The Malaysian construction industry has fallen behind compared to other developing countries. Some believe that partnering could be one of the methods that can be used in the construction industry to ensure the success of a project and maintain competitiveness and improve performance. However, culture was cited as one of the barriers to partnering. The phenomenon of "reluctance to change" has been consistently cited as one of the main barriers to partnering (Hai, Yusof, Ismail, & Wei, 2012). Although partnering is considered good by some stakeholders, a study by Redzuan (2019) showed that apart from the Pan Borneo project, there is a lack of research on the implementation of partnering in East Malaysia. Most of the studies concentrate on the benefits of partnering as well as the lack of focus in the East Malaysia construction industry.

Hence, while enabling all parties involved to benefit from partnering, stakeholders should clarify the possible challenges in partnering so that the project will run under schedule. This study aims to address two key questions: What are the critical barriers to partnering implementation? What are the strategies we can adopt to improve the implementation of partnerships? The present research aims to study the critical barriers to partnering implementation in the Sarawak construction industry. Examining significant obstacles to partnering implementation in the Sarawak construction sector is the first goal. The second objective is to suggest strategies for improving partnering implementation in the Sarawak construction industry.

Literature Review

Partnering Implementation in the Construction Industry

Partnering implementation is suggested by Latham (1994; Nkeleme et al., 2021) to tackle the challenges that occur in the process of utilizing the traditional procurement system, as such a collaborative form brings up the efficiency and competitiveness of the sector. However, numerous obstacles prevent the successful implementation of partnering. There is quite a bit of research related to the barriers to partnership implementation. This study utilizes the principal conclusions from previous research that explored partnerships as a reference.

An equal commitment from all of the project participants is required in the partnering process. However, due to the different goals among the partnering participants, the level of commitment is often uneven in construction practice (Moore et al., 1992; Ola-Awo & Amirudin, 2016). In the Nigerian construction industry, the involved participants are not committed to the philosophy of partnering. As a result, numerous disputes, claims, and litigation have arisen (Ola-Awo & Amirudin, 2016). In Vietnam's construction sectors, participants had no possession of any commitment to the mission of cooperation due to a lack of consistent objectives, as the partnering approach is not impelled (Le-Hoai et al., 2010).

In the process of partnership, trust must be developed; an attitude that aims to maximize the individual's gain and the unstoppable pursuit of agreement would bring benefits to the parties involved (Ng et al., 2002). According to Adnan et al. (2012), in

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the Malaysian construction industry, the parties involved inevitably encounter mistrust among themselves, resulting in conflicts between the parties during the implementation of partnerships. Mutual trust serves to integrate the useful resources and information as well as the knowledge contributed by the stakeholders and ultimately eliminate conflicting relationships (Mirawati et al., 2015). However, mistrust between project stakeholders affects the implementation of project partnerships in Nigeria. The unwillingness to share information and achieve beneficial cooperation among themselves despite suspicious information brought forward in the implementation of partnering in the Nigerian construction industry (Ola-Awo & Amirudin, 2016).

According to Engebø et al. (2020), integrated forms of delivery are often associated with the establishment of a project team in design and construction delivery. Project delivery can be achieved through methods such as partnering. Partnering concepts are always relatable to the project governance mechanism and a collective sense-making process. Improvements in relationships among project team members can also lead to a decrease in contractor litigation. However, partnering could not be beneficial to small construction enterprises and could impact the contractor–subcontractor relationship (Packham et al., 2003). Lack of funding, failure to deliver results by third-party vendors, poor leadership, and digital divide problems have been identified as a barrier to the implementation of partnering in Malaysia by Khadaroo et al. (2013). Partnerships between the public and private sectors are common in the construction industry.

Another research done by Hai et al. (2012) mentioned that the construction industry can be considered to have a very complex nature; thus, it needs a collaboration between various parties to make sure of the success of the project. The "complex nature" of the construction industry refers to the intricate and multifaceted characteristics that make construction projects challenging to manage and execute. It stems from its multifaceted nature, involving multiple stakeholders, coordinating diverse tasks, adhering to strict regulations, and managing fluctuating costs, timelines, and resources. It also faces technical, environmental, and safety challenges throughout the project lifecycle. Successful completion often requires effective collaboration and coordination among all parties involved, highlighting the need for effective management and execution in the construction industry.

When we look into the scenario of partnering implementation in East Malaysia construction industry, this method has been implemented in Pan Borneo project. It is a project that involving Sabah and Sarawak. Since this project is considered as a very big project, it can’t be operated by local contractors only due to lack of local skills on highway construction. Therefore, an engagement with contractors from Peninsular are needed. However, without collaboration from both partnering parties, the work cannot be done smoothly (Redzuan, 2019).

Barriers to Partnering Implementation

After conducting a thorough literature review of research from previous researchers on the topic of barriers to partnering implementation, 15 variables are identified and listed as shown in Table 1. The identification and formulation of pertinent variables are guided by the literature review, which is a fundamental phase in the research process. One of the most important steps in the research process that makes it possible to create a clearly defined collection of variables is conducting a literature review (Booth et al., 2012). It contributes to the development of a strong framework for this study by highlighting important themes, evaluating definitions, combining results, and filling in any gaps. By

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expanding on prior research, this method not only strengthens the study's validity but also advances the larger scholarly conversation.

Table 1: Barriers to Partnering Implementation

No.	Barriers to Partnering Implementation	Author(s)
1.	Lack of commitment from project participants	Moore, Mosley, & Slagle (1992); Le-Hoai, Lee, & Son (2010); Ola-Awo & Amirudin (2016); Bresnen, Lennie, & Marshall (2024)
2.	Lack of trust among the participants	Ng, Rose, Mak, & Chen (2002); Adnan, Shamsuddin, Supardi, & Ahmad (2012); Mirawati, Othman, & Risyawati (2015); Ola-Awo & Amirudin (2016); Nevstad, Børve, Karlsen, & Aarseth (2018)
3.	Proper understanding of the concept is lacking	Abdul Nifa, Ahmed, & Abdul Rahim (2015); Ola-Awo & Amirudin (2016); Walker, Serra, & Love, 2022
4.	Procurement legislation	Kadefors, Bjo¨rlingson, & Karlsson (2007); Eriksson, Nilsson, & Atkin (2008); Faraziera et al. (2010); Ola-Awo & Amirudin (2016)
5.	Technical knowhow is lacking	Ng et al. (2002); Ola-Awo & Amirudin (2016),
6.	Bureaucratic organizational setting	Larson & Drexler (1997); Ng et al. (2002); Chan, Chan, & Ho (2003); Chan, Fan, Lam, & Yeung (2006); Chan, Chan, Fan, Lam, & Yeung (2008)
7.	Unstable project leadership/government	Ola-Awo & Amirudin (2016);
8.	Adversarial relationship	Larson (1995); CII (1996); Larson & Drexler (1997); Chan et al. (2003), Hellard (1996); Ruff, Dzombak, & Hendrickson (1996); Ng et al. (2002); Bresnen et al. (2024)
9.	Lack of open and honest communication	Moore et al. (1992); Sanders & Moore (1992); Larson & Drexler (1997); Lendrum (1998); Le-Hoai et al. (2010); Bresnen et al. (2024)
10.	Unwillingness to compromise	Ng et al. (2002); Le-Hoai et al. (2010)
11.	Failure to implement appropriate training and guidance measures	Albanese (1994); CII (1996); Matthews, Tyler, & Thorpe (1996); Ng et al. (2002); Chan et al. (2003); Ho, Nguyen, & Shu, 2007; Le-Hoai et al. (2010)
12.	Lack of pre-defined problem-solving process	Sanders & Moore (1992); Brown (1994); Ng et al. (2002); Chan et al (2003); Ilmi (2019)
13.	Failure of sharing risk	Cook & Hancher (1990); Larson & Drexler (1997); Bubshait (2001); Chan et al. (2003); Bennet & Peace (2006); Caltrans (2011); Le-Hoai et al. (2010)
14.	Lack of key stakeholders' involvement	Love (1997); Ng et al. (2002); Chan et al. (2003); Nkeleme et al., 2021
15.	Use of competitive tendering arrangement	Ng et al. (2002); Bayliss, Cheung, Suen, & Wong (2004); Rooke, Seymour, & Fellows (2004); Control et al. (2008); Walker et al., 2022

Lack of Commitment from Project Participants

One major problem that compromises the efficacy of the partnering process in construction partnerships is the lack of commitment from project participants (Oliveira & Lumineau, 2017; Bresnen et al., 2024). The teams' varying objectives and passions cause this unequal commitment, which results in a lack of unity and devotion to the common purpose. According to earlier research (Moore et al., 1992; Ola-Awo & Amirudin, 2016), this difference in commitment frequently leads to disagreements,

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accusations, and even legal action, especially in nations where the partnership philosophy is not commonly accepted. Furthermore, the problem is made worse by the lack of precise, unified goals since participants could not completely embrace the collaborative method if it is not actively promoted or enforced (Le-Hoai et al., 2010). The success of building project partnerships essentially depends on a common commitment to objectives, which is frequently absent in practice, resulting in inefficiencies and disputes.

Lack of Trust among the Participants

Because it facilitates cooperation and the exchange of resources, data, and expertise between participants, trust is essential to the success of construction project partnerships (Ng et al., 2002; Mirawati et al., 2015; Nevstad et al., 2018). As seen in the Malaysian construction sector, where mistrust frequently results in disputes and a breakdown of cooperation, a widespread lack of trust between parties can seriously impede the partnering process (Adnan et al., 2012). These problems are worsened by a lack of efficient communication and a reluctance to share information, which leads to adversarial relationships that undermine the advantages of cooperation (Ola-Awo & Amirudin, 2016). The planned integration of resources and the resolution of problems are impossible without mutual trust, underscoring the crucial role that trust plays in project partnership success. Therefore, the successful use of partnership in the construction business depends on resolving mistrust and cultivating an environment of transparency and collaboration.

Proper Understanding of the Concept is Lacking

The development of partnering in the Malaysian construction sector is severely hampered by a lack of thorough comprehension of the concept and a lack of awareness of the entire process of cooperation (Ola-Awo & Amirudin, 2016). Although partnership is growing in popularity in Malaysia, many industry players are unaware of its full potential and are only dimly aware that the practice has been effectively applied in other nations such as the United Kingdom. The Malaysian construction industry, which is overseen by the appropriate authorities, may not be successfully sharing and disseminating contemporary international techniques, according to this knowledge gap. The problem is further compounded by the fact that Malaysian construction professionals are not interested in actively seeking new knowledge unless it is immediately relevant to a particular project (Abdul Nifa et al., 2015; Walker et al., 2022). As a result, the Malaysian construction industry faces significant challenges in achieving a thorough understanding of the partnering concept and process. Overcoming these barriers to knowledge and information dissemination is essential for the successful development and implementation of partnering in the industry.

Procurement Legislation

Eriksson et al. (2008) and Faraziera et al. (2010) identified public procurement legislation as a significant barrier in the implementation of partnerships. The objective of public procurement legislation is to stimulate competitiveness and advocate non-biased procurement determinants. Somehow in normal practice, there are no regulations prescribed on the lowest price among public sector clients, which means the great money value is another feature to be considered in evaluation. However, the government has not developed specific guidelines for partnering or created laws and regulations (Kadefors et al., 2007). Despite the introduction of such laws and regulations, Ola-Awo

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and Amirudin (2016) note that there are no specific guidelines for the implementation of partnering to ensure effectiveness. This lack of legislative support indicates that the full potential of public sector partnership is still being underutilised in the absence of more focused and thorough rules.

Technical Knowhow is Lacking

Partnering implementation has been impeded by lack of technical know-how. Practitioners are inefficiently providing decisions as well as the process of problem settlement in the implementation of partnering. Practitioners must acquire essential skills and knowledge to streamline the implementation process. This could threaten implementation if practitioners lack sufficient expertise (Ola-Awo & Amirudin, 2016). The Australian construction industry also suffers from a lack of technical know-how. The lack of technical experience in construction works has resulted in representatives of the client making decisions slowly. The representatives frequently refer to the solution from design consultants, which eventually decreases the efficiency of the decision-making process (Ng et al., 2002). To overcome these obstacles and ensure that the partnership process may be carried out more successfully and efficiently, practitioners must gain the requisite technical skills and expertise.

Bureaucratic Organizational Setting

In the public sector, bureaucracy is deemed an obstacle to accomplishing the partnering procurement approach in terms of the capability to form open working relationships (Larson & Drexler, 1997; Chan et al., 2003; Chan et al., 2008). Such issues not only occur in the scope of government departments but are also involved within a partner's organisation. Therefore, a degree of flexibility might be decreased due to the public accountability policy in the public sector (Chan et al., 2006). According to Ng et al. (2002), issues that arise from dealing with bureaucratic organisations are the result of a significant number of administrative requirements, and the most critical problem is a lack of flexibility in approaching the client, which contractors' faith in the client and in the relationship of partnership is directly negatively affected. Thus, bureaucratic obstacles and a lack of flexibility can undermine confidence and have a detrimental impact on the quality of partnership relationships, which hinders the procurement approach's efficacy.

Unstable Project Leadership/Government

Partnership projects may involve multiple witnesses, including three or more political administrators and ministers who align with different policies. The construction industry commonly encounters project leadership changing frequently from both the client and the contractor side. Furthermore, the culture of the country often distances itself from the principles of partnering. Besides, decision-making cannot be taken by the project subordinates on their own without their superior's permission. This view is conspicuously not coherent with the partnering principles (Ola-Awo & Amirudin, 2016). As a result, frequent leadership changes and the lack of autonomy for project subordinates lead to inefficiencies and compromise the efficacy of the partnering process.

Adversarial Relationship

'Win-win' thinking is a critical and essential element for the successful implementation of partnering (Hellard, 1996; Ruff et al., 1996; Chan et al., 2003). However, due to negative past experiences and fear of the unknown and variety, some of the practitioners

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are unlikely to trust the other participants (Larson, 1995; Larson & Drexler, 1997; Chan et al., 2003). Therefore, it is challenging for the project participants to alter the myopic ideal. Frequently, it appears that project participants strive to reap their own benefits from the relationship, but this often results in a situation where everyone loses out. Where there are issues that arise, participants require recompense (CII, 1996; Hellard, 1996; Chan et al., 2003). In other countries' construction industries, such as Australia, the unwillingness of the client is entirely committed to partnering in the project relationship due to the 'win-lose' attitude, especially related to the lack of client compromise and a conflicting organisational culture. In such an environment, the contractor loses faith in their client's ability to effectively drive the project's partnering process (Ng et al., 2002). Moreover, the absence of a 'win-win' attitude has occurred in the Taiwan construction industry. The partnering relationship is unlikely to be fully implemented to realise success where participants of the projects are not steadfast in possessing a win-win attitude (Chan et al., 2004; Chen et al., 2019). Consequently, partnership relationships are unlikely to work without a strong commitment to a "win-win" mindset, which will impede collaboration and project success.

Lack of Open and Honest Communication

Open and clear communication should be two-way and effective to enhance the understanding of a client's requirements. One of the key elements of partnership implementation is a timely, open, and direct line of liaison among all project participants. When issues arise in the project, it is crucial to resolve them on-site whenever feasible (Moore et al., 1992; Sanders & Moore, 1992). Inefficient communication among partnering participants prevents the free and honest exchange of information (Larson & Drexler, 1997). The ability of project stakeholders to resolve issues efficiently may degrade due to a lack of open and honest communication (Lendrum, 1998; Bresnen et al., 2024). One of the problematic issues for partnering implementation is poor communication among partners. Poor communication attitudes contribute to the ineffectiveness of information sharing among parties in developing the working environment. Scepticism should be excluded (Le-Hoai et al., 2010). To overcome these obstacles and guarantee successful collaborations, it is crucial to cultivate a culture of open communication and trust. This is necessary to handle problems effectively and cooperatively.

Unwillingness to Compromise

As mutual trust-based relationships are a component related to compromise, where failure to compromise arises among participants, mutual-based relationships would possibly break (Le-Hoai et al., 2010). Over time, the commitment gradually erodes. Moreover, lack of commitment to partnering in the project is also attributed to the unwillingness of the client to compromise its financially detrimental administrative procedures. According to a study by Ng et al. (2002), the problems with partnering in the construction industry include failure to compromise for a number of reasons, such as participants not being able to continuously evaluate and reiterate the partnering relationship, a lack of commitment that turns team solutions into individual solutions, stakeholders having trouble coming to terms with the team approach, the client not wanting to help when the contractor has a lot of financial problems, and the client not wanting to give in to the contractor's dominance, all of which are incompatible with a good partnering environment. These challenges show that partnering is ineffective

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without a willingness to make concessions, and the desired cooperative results are unlikely to materialize.

Failure to Implement Appropriate Training and Guidance Measures

To implement successful partnering practice, adequate and proper training should be emphasised, or it will be an obstacle to partnering implementation (Albanese, 1994; Matthews et al., 1996; Chan et al., 2003). Inadequate personnel training is one of the reasons for unsuccessful partnering; the concept of partnering is not fully being obtained by the staff and is therefore causing the partnering failure (CII, 1996). Chan et al. (2003) defined insufficient training on partnering practice as one of the difficulties encountered in the construction industry, particularly in their partnering projects. Ng et al. (2002) found that a lack of training and guidance in the arrangement of project partnerships affected the accomplishment of project goals. In addition, the absence of adequate guidance is caused by the client's unwillingness to show leadership in their follow- up support and partnering concept reiteration. Moreover, inappropriate information is covered in the training, and the benefits that can be manifested from efficient project partnership implementation are not achieved due to poor guidance. In addition, Le-Hoai et al. (2010) found that construction companies typically provide minimal or no training activities for their personnel. Hence, the construction industry will still be considered weaker than neighbouring countries (Ho et al., 2007). Therefore, to ensure that all participants are aligned and capable of executing the partnership process effectively, it is crucial to allocate resources towards comprehensive training and provide ongoing support.

Lack of Pre-Defined Problem-Solving Process

Ineffective and inefficient problem-solving mechanisms result in poor performance of partnering practice (Ng et al., 2002). Unresolved past conflicts in partnering can lead to new conflicts. Unsatisfied problem-solving often allows such circumstances to escalate in the partnering process. Even if the partnering charter is signed among the participants, problems would not disappear automatically, and conflicts among the parties are still possible (Sanders & Moore, 1992; Brown, 1994; Chan et al., 2003). Thus, a problem evaluation technique or methodology should be developed, as the problems in the partnering process can be discovered and rectified at a very early stage (Ng et al., 2002). Moreover, Ilmi (2019) defined that a regular and continuous assessment shall be conducted and improved to assess the performance of the team and the project to make sure that the project objectives are successfully achieved and are in line with the partnering agreement. Besides, a conflict or issue resolution strategy with effectiveness is required to be built up to settle the issues at the lowest level of management as possible without involving litigation (Ilmi, 2019). To sum up, proactive problem-solving, ongoing evaluation, and prompt dispute resolution are essential for preserving a positive working relationship and guaranteeing project success.

Failure of Sharing Risk

Perception of unfair risk sharing is appropriately nominated as a barrier to partnering implementation (Cook & Hancher, 1990; Larson & Drexler, 1997; Bubshait, 2001; Chan et al., 2003; Bennett & Peace, 2006; Caltrans, 2011; Nkeleme et al., 2021). Parties wish to procure benefits from the partnering process and reject possible risk. Partner relationships will further deteriorate if no parties are prepared to take on new risks. In the construction industry, both consultants and contractors view unfair risk sharing as a

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crucial issue. Clients commonly transfer most of the risk to the contractor as best they can. Therefore, the implementation of partnering frequently encounters this risk-sharing scenario as a challenge (Chan et al., 2003). Moreover, although risk sharing represents an equitable relationship among participants, top management in the construction industry rarely keeps this process's effects as they always are when aspiring to their partnering projects (Le-Hoai et al., 2010). Thus, the partnering process is likely to encounter major obstacles, resulting in strained relationships and the possible failure of the project, unless an open and equitable approach to risk sharing is established.

Lack of Key Stakeholders' Involvement

Partnering is a process that involves not only clients and contractors but also comprises other participants, for instance, architects, designers, manufacturers, and consultants, as well as subcontractors, etc. (Chan et al., 2003). As Love (1997) and Nkeleme et al. (2021) mentioned, they are likely to embrace the partnering philosophy as a much more productive and profitable way of doing business than the adversarial approach. When a key stakeholder is not involved, their commitment may decrease (Ng et al., 2002). Ng et al. (2002) found that issues with the contractor's commitment led to the absence of key stakeholders in partnering projects. Less involvement of key stakeholders in the partnering process is entirely reflecting the less intimate relationship among participants to deal with construction issues. The success of the partnering strategy is at risk since it lacks the closeness and trust necessary for efficient problem-solving and decision-making when all stakeholders do not actively participate.

Use of Competitive Tendering Arrangement

Utilization of competitive bidding is nominated as another barrier in partnering implementation, as it reduces the flexibility and commitment (Ng et al., 2002; Bayliss et al., 2004; Control et al., 2008). Rooke et al. (2004) defined that, to successfully be chosen to tender the project and attempt to increase profits through alternate change and orders, the contractor will purposely bid low in the tendering process. Ultimately, such longstanding negative tendencies need to be overcome because of achieving successful partnering with other participants, as they can cause estrangement in trusting relationships if not addressed. Many preceding problematic issues, including the level of commitment of stakeholders for the project partnering arrangement, were the result of the use of a competitive tendering arrangement. In the construction industry, a project might make the contractor switch their priorities from partnering on the project to a "win-lose" mentality to protect profits after finding out that the profit margin is very low and that cost control was being done very hard during the project to protect the margin (Ng et al., 2002). To ensure the long-term success of partnering agreements in building projects, it is crucial to overcome these unfavourable tendencies.

Methodology

The approach used for data collection in the present study is the quantitative research method, as it is easier to compare and describe (Flick, 2015). According to Nishishiba et al. (2014), the most typical method of data collection is questionnaire survey as the feedback can be obtained within a short period of time. Mathers et al. (2009) also interpreted that in a questionnaire survey, the first batch of questionnaires should be returned within at least six weeks. In addition, a number of tasks such as a cover letter, the respondent's background and multiple-choice questions were included in the

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structured questionnaire and distributed online via email or in person depending on the current situation.

In this study, probability sampling is used as the main sampling method. Probability sampling, especially simple random sampling, is useful for quantitative research because it guarantees that every member of the population has an equal chance of being selected, which improves the validity and representativeness of the results (Groves, 2009). As it allows robust statistical inferences to be made about the entire population, this approach is a reliable option for researchers.

A list of G7 and G6 contractors in Sarawak was downloaded from the CIDB website, while the list of developers was obtained from the Sarawak Housing and Real Estate Developers' Association (SHEDA). Consultant Architects and Quantity Surveyors registered with the Government of Sarawak and M&E Engineers were selected and each company was assigned a number. G6 and G7 construction companies were selected as interviewees because they were more likely to have been involved in projects where partnering was considered or implemented, so they can identify both the barriers and potential solutions from their experience. Furthermore, as G7 and G6 construction companies tend to undertake larger projects, they are directly affected by the complexities and challenges of partnering on large construction contracts, so their perspective is relevant.

The number of Grade 6 contractors who registered with the CIDB is 171 while for Grade 7 contractors it is 701 (CIDB, 2023). Developers across Sarawak consist of 213 numbers registered as members with the Sarawak Housing and Real Estate Developers' Association. Consulting architects and quantity surveyors registered with the Government of Sarawak consist of 310 numbers; electrical engineers consist of 233 numbers and mechanical engineers consist of 353 records. The Slovin formula is used to determine the sample size as it allows for confidence levels and margins of error to be taken into account. Taking into account a confidence level of 95 % and a margin of error of 5%, the sample size for this study is approximately 322.

Descriptive analysis and the mean value are used to analyze the collected data. Descriptive analysis and mean value are essential methods for analyzing data in quantitative studies. Descriptive analysis provides an overview of key data characteristics, using tools like frequency distributions, percentages, and graphical representations (Pallant, 2020). It helps identify trends, variations, and outliers, and is particularly effective for summarizing large datasets. The mean value, or average, is a widely used measure of central tendency in quantitative research, providing a single summary statistic that represents the "central" value of a dataset. It is particularly suitable when data is normally distributed and helps understand general trends (Field, 2013). When used in conjunction with other descriptive methods, the mean contextualizes data, providing a solid starting point for more complex statistical analyses. Both methods offer a comprehensive yet straightforward approach to understanding quantitative data, guiding researchers in identifying key patterns and central trends before moving on to more advanced statistical techniques.

Findings

The summary of the overall information and background of the respondents are shown in Table 2. The involved respondents are Grade 6 and Grade 7 contractors that registered under CIDB Malaysia in Sarawak construction industry, developers who are currently

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proactive and are being registered under Sarawak Housing and Real Estate Developers' Association (SHEDA) as well as consultants in Sarawak construction industry. Out of 322 respondents, 103 of the valid responses had been achieved, which means 32% of the response rate is valid. A response rate of 32% is perhaps not particularly high and carries the risk of bias due to non-response. However, as the sample was randomly selected using probability sampling, the 32% of respondents could still be fairly representative of the population (Dillman et al. 2014). Since the survey targeted G6 and G7 contractors and this group is difficult to reach or employ, a 32% response rate can still be considered acceptable and the data can still provide reliable insights, especially with a large enough sample.

Table 2: Respondent's Personal Information and Background

Respondent's Personal Information and Background		Frequency	Percentage (%)
Gender	Male	73	70.87%
	Female	30	29.13%
Age	21-30 years old	39	37.86%
	31-40 years old	37	35.92%
	41-50 years old	20	19.42%
	51-60 years old	7	6.8%
Working Experience	Below 2 years	24	23.3%
	2-5 years	30	29.13%
	6-10 years	26	25.24%
	10 years and above	23	22.33%
Type of firm	Grade 6 Contractor	23	22.33%
	Grade 7 Contractor	29	28.16%
	Consultant	30	29.13%
	Developer	21	20.39%
Position	Architect	27	26.21%
	Quantity Surveyor	34	33%
	Civil & Structure Engineer	28	27.18%
	Mechanical & Electrical Engineer	10	9.71%
	Others	4	3.89%

Source: Authors

The barriers that impede the partnering implementation in Sarawak construction industry and the mean rating, standard deviation, rank as well as significant level for each of the variable are shown in Table 3 below.

Table 3: Scale for Barriers of Partnering Implementation in Sarawak Construction Industry

Barriers	Mean	S.D	Rank
Lack of open and honest communication	4.19	0.68	1
Proper understanding of the concept is lacking	3.88	0.82	2
Unwillingness to compromise	3.83	0.91	3
Lack of trust among the participants	3.67	0.82	4
Lack of pre-defined problem-solving process	3.67	0.93	5
Failure of sharing risk	3.65	0.91	6
Unstable project leadership/government	3.53	0.99	7
Lack of key stakeholders' involvement	3.52	0.96	8
Technical knowhow is lacking	3.49	0.93	9
Lack of commitment from project participants	3.46	0.88	10

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Failure to implement appropriate training and guidance measures	3.46	1.01	11
Adversarial relationship	3.43	0.87	12
Procurement legislation	3.41	0.81	13
Bureaucratic organizational setting	3.36	0.94	14
Use of competitive tendering arrangement	3.22	1.07	15

Source: Author

Discussion

Giving the RII and rankings, the results are self-explanatory. According to the findings, the major barriers of partnering implementation in Sarawak construction industry is agreed upon by the current study respondents. The principal results included lack of open and honest communication, proper understanding of the concept is lacking, unwillingness to compromise, lack of trust among the participants, lack of pre-defined problem-solving process, failure of sharing risk, unstable project leadership/government and lack of key stakeholders' involvement. The eight (8) described key variables have also received good marks in prior studies. Overall, the results suggest that the removal of these barriers will be critical to the successful implementation of partnering in the Sarawak construction industry. These findings are consistent with previous studies and highlight the universal nature of these challenges across different regions and industries. By removing these barriers, stakeholders can work towards creating a more collaborative and efficient construction environment.

The first research objective of the current study is to examine critical barriers of partnering implementation in Sarawak construction industry and the second objectives is to recommend strategies that can be adopted to enhance partnering implementation in Sarawak construction industry. The study objectives were achieved in this study. There are fifteen (15) barriers to partnering implementation highlighted in this research. In the Sarawak construction industry, the current study revealed eight (8) significant barriers of partnering implementation in Sarawak construction industry which are "lack of open and honest communication", "proper understanding of the concept is lacking", "unwillingness to compromise", "lack of trust among the participants", "lack of pre-defined problem-solving process", "failure of sharing risk", "unstable project leadership/government" and "lack of key stakeholders' involvement". The categorization of barriers into significant and moderately significant groups is crucial for identifying strategies and interventions to overcome them. Significant barriers significantly impact a partnership's success and sustainability, while moderately significant barriers pose challenges but don't threaten its overall success. This helps stakeholders focus their attention and resources, with significant barriers crucial for the partnership's survival and long-term success, and moderately significant barriers leading to efficiency and collaboration improvements. In this study, the mean rating technique is used to classify the statistical significance of the obstacles, which ranges from 2.5 to 3.49 and 3.5 to 4.49. The result of this study shows there are no substantial critical competencies, as no variable has an overall mean of 4.5 to 5. As a result, the current study's goal has been met. The study has achieved its objectives by identifying the main barriers and providing a clear picture of the areas where development is needed. Although there are no major obstacles that cannot be overcome, it is clear that resolving these moderate but significant challenges is essential to improving collaboration in Sarawak's construction sector. In order to ensure more seamless collaboration and

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successful partnership in upcoming construction projects, the next step should be to develop and propose targeted methods to address these obstacles.

The second objective is also achieved by gathering the recommendations from the respondents on the strategies that can be adopted to enhance partnering implementation in the Sarawak construction industry. There are two recommendations given by the respondents. The first recommendation is that issues relating to communication, especially honest and open communication, should be achieved in a working team in order to accomplish the desired goals. According to the respondents, this is the best strategy since the Sarawak construction industry involves different races of personnel in the same working environment. The project leader should foster sufficient ability to present clearly in a project and convince other parties to achieve honest communication in order to work in a motivated working environment. The recommendation emphasizes that one of the most important ways to improve the implementation of partnerships is to remove communication barriers, especially in a multicultural environment such as Sarawak. By fostering a culture of open communication and empowering project managers to drive this process, Sarawak's construction sector can overcome the current barriers and move towards successful collaborative projects.

The second strategy recommended is that the partnering concept should be clearly understood among the project stakeholders before the project commences. Proper education and awareness campaigns are a way to mitigate barriers. Project parties will have the opportunity to get the concept clearly and thus improve their own ability and understanding regarding the partnering implementation to be successfully conducted.

These two root barriers should be addressed and improved by the suggested strategies aforementioned. When open and honest communication is achieved, the behavior and attitude of the participants will be more amicable; hence, trust and commitment among the parties in the project will not be a critical barrier that interrupts the partnering process. Furthermore, once a proper understanding of the concept has been improved, the skills of project parties become better at problem-solving decisions in the partnering process.

To summarize, improving the partnering process in Sarawak's construction sector requires the removal of these two main barriers: communication and understanding of the idea of partnering. The sector can foster a more collaborative atmosphere that will improve project outcomes and partnership execution by ensuring that stakeholders are informed and communication is open.

Limitation/Implications/Conclusion

The study shows that the construction industry in Sarawak faces challenges in implementing partnerships, including communication problems, lack of trust and insufficient understanding of the concept. To improve collaboration and project outcomes, the study recommends improving communication, promoting a deeper understanding of partnering and investing in education and awareness campaigns. This will help construction companies, project developers and consultants to manage partnerships effectively and encourage a shift from adversarial relationships to collaborative relationships. The study acknowledges limitations but also offers opportunities for future growth. Extending the study beyond Sarawak to other regions or internationally may provide a broader perspective on the barriers to partnerships in the construction industry. Including lower-tier contractors in the study could provide a

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more comprehensive understanding of barriers at all levels of the industry. The inclusion of qualitative methods such as online interviews in future studies could provide deeper insights into the real challenges faced by industry participants. These findings can be used to shape future strategies, training programs and collaboration frameworks in the Sarawak construction industry and provide a roadmap to address current barriers and improve project outcomes. The study will serve as a catalyst for further research and improvements that will ultimately contribute to a more resilient, efficient and collaborative construction environment in Sarawak.

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