**THE MITIGATION ACTIONS IN MANAGING THE IMPACTS OF FOREX FLUCTUATIONS ON CONSTRUCTION BUSINESS PERFORMANCE**

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**Abstract** :The study provides guidelines for implementing mitigation actions against the effects of FOREX fluctuations. Using this framework, top management in construction organizations can better understand the role of OC in their strategy to make accurate decisions in curbing the impacts of FOREX fluctuations. Qualitative research was conducted in response to this. Data collection for this research involved interviewing 14 respondents who represented Malaysian construction organizations and were actively involved in international construction projects. The respondents ranged from Chief Executive Officer (CEO), Chief Financial Officer (CFO), and financial and project managers. NVivo Version 11.0 was used to manage the transcribed interview data. The data was analysed via content analysis. Results revealed that FOREX fluctuations impact the financial performance of construction businesses. This study shows the potential impact on the business performance of Malaysian construction organizations if practical mitigation actions are carried out during FOREX fluctuation, which can contribute to improved performance for construction businesses in dealing with international project operations. Overall, this study provides remedial steps and guidelines for Malaysian construction organizations to improve their business performance in the international construction market. It also explains the impact of FOREX and OC fluctuations. Future research could explore the longitudinal effects of FOREX fluctuations to observe how construction companies apply mitigation actions during FOREX fluctuations in a real-life context.

Keywords : mitigation action, FOREX fluctuation, financial, technical, business management

**1.0 Introduction**

The main objective of managing foreign exchange risks is to guard against and reduce any negative impacts on corporate earnings, such as cost overruns triggered by fluctuations in exchange rates. There is an elevated probability of delays in the project when cost overruns occur. The susceptibility of a company to FOREX fluctuations can be reduced if its technical, financial, and business management competencies are enhanced. Thus, the effects will be effectively controlled or remedied, and company operations in the global construction sector will proceed as planned and expand accordingly (Mohamed, 2022).

* 1. Foreign Exchange (FOREX).

The foreign exchange market is an internationally competitive over-the-counter currency financial market that regulates the foreign exchange rate for each currency and manages all details of selling, buying, and exchanging currency at current or set prices. Its primary hub for regional trade is based in London, United Kingdom. As of April 2019, the UK has become the world's leading foreign exchange trading centre, managing 43.1% of the global trade (Bank of England, 2019).

1.2 Impacts of FOREX Fluctuations

For businesses investigating the project's expenses, profitability, and financial risks, cash flow forecasting is necessary. According to Han et al. (2016), FOREX fluctuations are included in internal and external unpredictability that affects financial projections for international projects. As an example, the authors showed how these fluctuations affected the project's cash flow prediction in research on a Korean construction company working on a project in Brazil. The projected profit decreased by 4% due to the fluctuating exchange rates between the project's starting and ending phases. Furthermore, the majority of construction companies that engage in cross-border project bidding typically see reduced declared returns in cases where the target nations possess stronger investor protection regulations.

Depending on their location, bidders and targets saw a substantial contrast in abnormal returns (Mateev & Andonov, 2017). One contributing variable that influences the company's management competencies is the absence of managerial expertise among project managers. Due to the foreign managers' lack of awareness of the base country's local working culture, this ineptitude in management would ultimately result in project cost overruns. In addition to raising the cost of raw materials, FOREX fluctuations are an important trigger to project cost overruns (Fidan et al., 2011). Furthermore, Costa, Dhingra, and Machin (2019) noted how the employment market was significantly influenced by the local currency's fluctuations, which may have been triggered by political factors. It suggests that FOREX fluctuations have an impact on business management, particularly the management of labour. Given the potential impact of fluctuations causing changes in the currencies associated with the project, construction companies may face salary adjustment issues, such as during political unrest in the project's base nation.

1.3 Actions in Managing the Risks of FOREX Fluctuation.

Mohamed et al. (2020) claim that a thorough understanding of how FOREX fluctuations affect overseas construction projects in terms of firm management, finances, and technology has been discussed within the academic literature. The approaches implemented by firms to manage performance, including the financial components, are related to company management. As noted by Kituku (2014), the exchange rate directly influences the level of productivity and capital allocation, domestic market rates, and firm investment decisions, all of which have a major effect on the success of firms. All of these variables are crucial to construction organisations and enterprises as they might have a direct impact on a project’s progression.

International construction projects require companies to consider prospective uncertainties, such as FOREX fluctuations, which can have a considerable effect on company performance (Shehu & Wang, 2020). When pursuing international construction projects, construction companies must comprehend the effects of FOREX fluctuations and put together measures for managing them in advance. International investors have to comprehend the foreign exchange market and the purpose of international shares to develop a practical investment strategy when there is a global movement in currency rates. Lastly, Almsaeed (2020) remarked that if FOREX fluctuations are not properly managed, they can pose an enormous risk to international construction enterprises and projects, including project in-viability and profit loss. Hence, fluctuations in foreign exchange rates must be carefully weighed. To maintain their business performance and competence, the firms must effectively develop their abilities to manage FOREX fluctuations.

The firms will bear additional operational expenses, which consequently affect the project's performance, harming construction companies that are already sustaining the increasing total cost of multiple overseas projects (Prasad & Vasugi, 2019). As noted by Abdul Rashid and Shahid (2017), it illustrates why FOREX fluctuations jeopardize the business performance of construction companies, including the completion of international construction projects. The main focus is the OC viewpoint, given the significance of determining the way OC affects the nature and robustness of measures that firms adopt to successfully and efficiently control the effects of FOREX fluctuations on construction projects. Likewise, it is essential to consider how the control measures will influence the business outcome of construction companies.

1.4 Research Question

(a) How do FOREX fluctuations influence the performance of construction firms?

(b) What remedial measures can be implemented to control the influences of FOREX fluctuations on the performance of construction firms?

1.5 Research Objective

To achieve the goal of the research, two objectives consistent with the research questions are as follows:

(a) To investigate the ways FOREX fluctuations influence the performance of construction firms.

(b) To identify the remedial measures that can be implemented to mitigate the influence of FOREX fluctuations on the performance of construction firms.

**2.0 Research Methodology**

Semi-structured interviews, a qualitative research method, are used in this study to bolster the findings. Key informants from Malaysian construction companies participating in international construction projects formed the population, involving the CEO, CFO, and project managers. The Construction Industry Development Board Malaysia (CIDB) produced a list of the construction businesses chosen, and key informants were identified using the nested sampling method. These firms satisfied the following requirements: (a) the firm has a few projects abroad; (b) it is a running construction business; and (c) it has three years of field experience. Then, face-to-face interviews with 14 respondents from Malaysian construction firms were conducted.

In research like this one, the face-to-face interview method is preferred for obtaining high-quality data as (i) it involves vulnerable subjects, not personal; (ii) the questions have an obscure meaning that is challenging to figure out; and (iii) the conversation is likely to be long (Schober, 2018). Furthermore, the interview questions were prepared to address the study questions. Afterwards, a verbatim transcription of the interview material was produced. The data analysis was facilitated by NVivo 11, a qualitative data analysis program enabling audio recordings and transcripts to be coded. NVivo software fulfils these needs (Eziyi et al., 2016).

***Table 2.1: Key Themes of Interviews***

|  |  |
| --- | --- |
| How do FOREX fluctuations influence the performance of construction firms? | * Gross profit
* Loss
* Project failure
 |
| What remedial measures can be implemented to control the influences of FOREX fluctuations on the performance of construction firms? | * Business administration
* Technical
* Financial
 |

1. **Results and Discussion**

The research findings are broken down into two areas, as outlined below.

##### 3.1 Effects of FOREX Fluctuations on Construction Firms

According to the data analysis, the majority of the construction organizations interviewed in the present study are affected by FOREX fluctuations. The respondents considered that one of the risk factors faced by Malaysian construction firms engaging in an overseas project is FOREX fluctuations. Most interviewees concurred that the fluctuations in FOREX had an influence on the project level, which consequently impacted profit margin with cost overruns. The following comments are extracted from the interview:

*… when the inflation shot up, the price increased. We had issues with local supporting contractors over transportation. At first, they submitted their price for the sake of getting the job. Then we were in the middle to get the service. They said we could not continue our service because their price was increased, although the early agreement was signed. This later, in return, affected our maintenance cost and profit margin. (R2).*

*… the only effect is maintenance cost. The maintenance cost will be affected, so our profit margin will decrease. (R1)*

 The interviews made apparent that FOREX fluctuations affect construction firms in a number of aspects. The profit margin is perceived as receiving the greatest negative impacts due to higher maintenance costs, higher material prices, higher travel and transportation costs, loss in currency exchange transactions, and delayed completion of projects. Furthermore, it causes project delays and cost overruns. Most participants acknowledged that FOREX fluctuations had consequences on their projects. According to the findings, significant fluctuations in exchange rates influenced the competitiveness of the business and, consequently, a substantial increase or decrease in the profitability of the organization.

The participants stated that changes in currency exchange rates might cause rising raw material costs, labor costs for both skilled and unskilled labor, and efficient machinery costs, which might impede the execution of international construction projects. Technical talents determine the incapacity to oversee labor, machinery, and materials.

*Sometimes, we waited for the exchange rate to be a bit lower. It takes time, though. (R7)*

*How long has the project been delayed? …around 6 to 8 months, almost a year. The raw materials are more expensive. Thus, we have to wait for some funds from other projects. (R4)*

Furthermore, FOREX fluctuations caused the rising cost of building resources, including raw supplies, machinery, and labor, and significantly impacted the overall cost of the projects.

*… the cost due to FOREX fluctuations in Hong Kong is slightly higher due to expensive labour. Sometimes we have to reduce our workers. Then another issue arises, which will delay the completion. (R8)*

 From the construction business standpoint, financial capability refers to a firm's financial resources, including cash, demand deposits, certificates of deposit, receivables, and other financial instruments that cover the effects on market value, cash flows, profit margin, and cost overruns. According to the respondents, the financial condition of overseas ventures was significantly impacted by FOREX fluctuations, which exacerbated the chances that the project would fail. The predicament is brought on by a number of risk factors, such as economic, translation, and transaction, that influence operating company value and cash flows.

*The one that impacts your bottom line in terms of actual Ringgit that count in your pocket is the transaction. The transaction affects you because it takes you more Ringgit or less Ringgit, depending on the exchange rate, to complete the transaction, whereas the translation is for reporting purposes. (R4).*

*The construction organizations will take a loan from a local bank in Indonesia. The currency is Rupiah and USD. The construction organizations withdraw the disbursement claimed from the financial year based on the usage of plantation activity. I think you can apply the same thing for construction. Of course, when the construction organizations obtain the bank funding, it is based on USD. As far as the benefit is concerned, the group is reporting using Ringgit, although the benefit of the currency doesn’t flow to the group at the head office; when it comes to financial reporting, there will be an impact of fluctuations in foreign currency. (R5)*

Acquiring raw materials becomes more challenging as the currency value rises. Particularly when the resources are imported from other nations, it will have a consequence on the companies' initial investment when compared to the stipulated pricing. The respondents concurred that FOREX volatility would also have an impact on material costs, which would have an impact on construction companies' initial investment. It usually occurred as a result of higher import tariffs on goods and supplies for the project.

*It was crazy! The raw materials, at that time, Qatar had limited sources. Internal sources were limited. They imported most of the materials from their neighbours. Now the price increased, if you want, you have to pay this extra. (R2)*

*The FOREX fluctuations impact the project when we order materials from overseas. Order from overseas, from China, the fluctuations give the impact, in terms of cost. And managing the material to be brought from China to Qatar takes a lot of time. (R4)*

*Unless you are building a very high-rise building, then, of course, specific steel bar material comes in exceptional sizes, which generally, not many people use. Then you must make a particular order from the steel manufacturer, generally from a few countries only: South Korea, Japan, and China. So, when you must get this entire thing, they will charge you in USD. So, that is the time you need to set and manage your FOREX risk upfront. (R6)*

*Moreover, in Bosnia, the resources are minimal. Thus, the construction organizations are forced to import all the resources. This will result in higher exposure to the risk of currency translation. Whether or not the construction organizations will suffer huge impacts of FOREX fluctuations in translation towards their financial capability. (R12)*

All participants interviewed agree that there will be direct financial repercussions from the surge in FOREX. Unanticipated changes in exchange rates, particularly if the supplies are imported, can impact the values of liabilities, assets, or operating earnings. For example, countries like Bosnia and Qatar do not have adequate local resources. The necessary supplies will need to be imported by the construction firms, and the project cost would increase as a result. The construction businesses would lose money or at least make less profit. It is crucial for construction enterprises to have the financial capability to handle the potential rise of raw material prices as a result of FOREX volatility. Construction companies that lack sound financial standing will struggle in the event of an unanticipated financial crisis due to economic circumstances, leading to expensive currency exchange rates when working on the project abroad.

*...when the construction organizations bring their staff to work on the overseas project, they need to pay their staff in Ringgit Malaysia. In contrast, the profits from the project they acquire are in foreign currency. This situation gives a higher risk of transactions because the payment to the staff is commonly monthly. So technically, the construction organizations need to pay them more during that month due to the FOREX fluctuations, and this transaction exposure hurts the construction organization’s financials and its cash flow... (R9)*

*For the case in Indonesia, the transaction of money cannot be done directly. There is no direct exchange between Ringgit Malaysian and Indonesian Rupiah. The Ringgit Malaysia needs to be transferred to the US Dollar first and then to the Indonesia Rupiah. This situation involved two transactions, thus will result in higher transaction exposure. This shows that the impacts of FOREX fluctuations are enormous in terms of money transactions. The financial capital of the construction organisations might be affected, and their financial capability will face challenges in terms of transactions’. (R10)*

The effects of FOREX volatility can also be perceived in the aspect of business management, particularly on a company's performance, procurement, marketing, reputation, and capacity to sustain itself in the global market. According to the respondents, business management for international projects was seriously affected by FOREX fluctuations. It can be observed when, due to insufficient cash flows, FOREX volatility impacts the project operation, especially when it comes to project execution, supplier payments, and bank loan repayment.

The issue is further exacerbated when construction companies must utilise foreign currency and gain financing from a different currency. Cost escalation is frequently caused by financing and paying for finished work. Furthermore, the most frequent downside to project delays is cost overruns, which occur when the amount spent exceeds the project's initial budget or expected cost. Cost overruns are also often caused by FOREX fluctuations as the construction project requires several years for completion and is influenced by the economic situation in the host countries.

When responding to a question on how the Chinese exchange rate impacts business management and the possibility that contractors are replacing their China partners, R9 said,

*There’ll be effects because there’s some understanding with the contractor on the China team. After all, they get it from China. The contractor cannot be changed from China. Muhyiddin Yassin signs the project. So, the contractor will be in China, the fund from Taiwan. (R9)*

When political officials are involved in a project, the construction companies must take their reputation into consideration. They must deliver the project regardless of the constraints brought on by FOREX fluctuations. Other effects of FOREX fluctuations solely felt at the construction organizational level have also been reported by the interviewees, such as the assets, liabilities, and operating earnings.

*… For example, my company has 50 million in the bank. But, I can take 10 million only. I could not take 50 million according to the asset that has been given. (R1)*

*So, all of our assets have to be disposed of to pay off the vendors, which is the only solution because we can’t take any more money from Malaysia. (R8)*

*…[during] recessions, the downturn of the economy and the credit crunch, the first industry affected is the construction industry. Some of these impacts are related to FOREX fluctuations. (R11)*

The respondents also stated that the firm's performance, reputation, and capacity to sustain itself in international trade were all impacted by FOREX volatility due to the changes in the profitability of construction firms in trade and investment transactions.

*… we made a deposit worth RM100 million for the start-up in Bosnia. However, upon completion, we transferred the deposits back to the Malaysian Ringgit account, and we only received approximately RM80 million due to the fluctuations of the FOREX. The situation left us no choice but to suffer the loss. (R4)*

According to the respondents, the disparities in the government systems of different countries and FOREX volatility led to stricter regulations regarding international business. Malaysian construction companies will be impacted by this situation when participating in upcoming construction projects in those countries.

*The second thing is they have to check the government policies. It will cause more difficulties [and require] flexibility of the government. (R1)*

 Technical resources and business administration are two other aspects indirectly linked to the effects of FOREX fluctuations. An illustration of how foreign exchange fluctuations may affect a firm's technical, financial, and business administration is forwarded in Musa's (2014) study on the Kenyan oil sector, which has grown increasingly associated with international-level financing as it grows. When working on an international project, construction firms have to factor in the significant long-lasting effects of FOREX fluctuations on their profitability and cash flow.

3.2 Mitigation Actions Implemented to Control the Influences of Forex Fluctuations on Construction Firm Performance

The primary theme, as determined by the research findings, is readiness. The majority of businesses take a number of mitigation measures that fall under the theme of readiness, suggesting that most businesses made advance preparations for FOREX fluctuations. The following remarks are extracted from the interviews:

*First of all, when they take overseas projects, they do a feasibility study. In our field, we are most concerned about the soil condition in the underground project, micro-tunnelling. The premier data is on soil condition ... The second thing is they have to check the government policies … more difficulties or the flexibility of the government … So, once the analysis is done … they may like to take the particular job … Then ... what is nature … the people around the area …. Mostly, they will try to take the proper guy from the organisation … to go with the investigation (2:58) government authority … approaches. (R1)*

*Both on-site and at the satellite office … they will advise us to buy the materials early or wait... Most of the time, we don’t have issues since we prepare. (R3)*

*We minimised the FOREX impacts and equipment by preparing the equipment required to start. (R3)*

*Inside the contract, they allow for the fluctuation rate. (R4)*

*You know, we prepare earlier, for example, you are afraid that the oil price will go up in future. So, you buy in advance at a lower price. You enter a forward contract to purchase commodities at USD 50 a barrel because you’re afraid that the price will become USD 80 a barrel three months in the future. So, I buy now quickly. (R10)*

*Discussions about hedging should occur very early. Before starting a foreign venture or foreign investment, you should discuss hedging. (R9)*

 The respondents suggest that they have taken several preparatory measures in anticipation of the situation in the other countries, encompassing government regulations, business and project environments, foreign exchange fluctuations, and economic conditions. The contractors usually implement the hedging strategy to reduce the financial effect of FOREX fluctuations.

**Hedging.** According to the majority of participants, hedging is a frequently applied means of reducing the effects of FOREX fluctuations. Market instruments are carefully employed to minimise the risk of any disadvantageous price movements. Unfavourable FOREX fluctuations are considered an adverse occurrence in this study. The construction firm tends to sign contracts or agreements with relevant parties. These remarks imply that the contractors utilised hedging to reduce the impact of FOREX fluctuations:

*…when taking a loan from a bank, the construction organizations will agree with the bank regarding the FOREX fluctuations. The construction organizations will pay the money to the bank later at the same rate they are borrowing from the bank in the first place. However, this method has some limitations: the bank will only be covered up to 10%–20% of the fluctuations. In other words, if the FOREX fluctuations are too severe, the bank might not be able to cover that much. (R7)*

Construction firms also have the option to hedge when engaging with clients or suppliers to mitigate the risks brought about by FOREX fluctuations.

*We try to mitigate in terms of negotiating with the supplier, the local Indian supplier, to maintain the rates or reduce the rates due to our long relationship…It does help, but we can’t gain much from that. We cannot buy their material to tag under USD or Malaysian ringgit. If we know there is a loss in FOREX exchange, let’s say 2%, we try to reduce the rate by 2%. If 3%, we try to reduce the rate by 3%. If the rates are getting stronger, we are getting more rupees, and then we maintain the rate. Eventually, the rate of exchange will go up and down. If it’s over 4–5 years, it will be sort of not so much. It will be at a baseline. (R8)*

*…before it happens, we have locked in the price. Some we have locked in at 70 per cent of the price. Before the situation happened, we locked the price; the impact may be 30 per cent of the balance of the order. (R12)*

**Suggesting local supplies usage.** The interviewees urged that the local currency should be used to purchase the supplies acquired during the project. It minimises the effects of FOREX fluctuations on the business, which might advantageously or adversely impact them by influencing transactions between different currencies.

*At that time, we bought most of the materials from the local supplier. (R7)*

*…our materials are mainly sourced from the local market. That means if… the project is in Dirham. We purchase* [materials] *in Dirham. If it is in Riyal, we purchase* [materials] *in Riyal. So, because our finance is obtained from the same country and currency, there isn’t any impact from the fluctuation. We rarely have many transactions or supplies from overseas. (R5)*

The respondents urged maximising the acquisition of supplies from the local market where the project is presently undertaken. Even if local supplies may be marginally more expensive, firms are exempted from taxes compared to importing them from beyond the local area.

*… Our strategy is to get equipment materials, all locally in India. So, we invest a lot, but the contract that we get is quite supportive or friendly; they give an advance for purchasing equipment, free tax, no duty on equipment for the project, which makes us more interested in the project. (R8)*

**Bringing in dedicated, skilled labour.** Rather than employing new experts wherein the project takes place, the respondents strongly advised bringing experts currently employed by the firm in Malaysia with them. They believe that involving their own experts, who remain entitled to their regular wages no matter if they engage in local or international projects, will maximise the advantages from the business's expenses compared to employing new experts abroad while paying the employees in Malaysia who have no involvement in the project.

*Yes, we do use our experts. (R13)*

*Sometimes, we don’t cater to extra staff when tendering because we have the manpower. Typically, we will send them off. At least they have a job to be completed rather than doing nothing. (R3)*

The respondents claimed that, besides cutting expenses to employ new professionals whenever undertaking a project abroad, this approach assists in promoting highly competent employees and boosts the image of Malaysia in the global market. The firm will be recognised as one with a network of experts, boosting its reputation and prospects as a competitive business prepared to embark on international projects.

*Marketing something like technology, design and then manpower… Yes, at the same time, we are selling expertise from Malaysia. (R14)*

**Properly managing the customer.** The respondents stressed an essential aspect of any business engagement: addressing customer demands. They argued that tending to the demands of clients is the most crucial part of every business engagement, and it is a matter of business management.

*A company is seen as a good company that can deliver the projects if it can do this well. How good you are in dealing with your client is this business management issue. (R9)*

*We proposed local products with one client, but they refused. They wanted a product from China and Italy. It’s a client requirement, so we must follow. (R14)*

The respondents pointed out that a firm's ability to fulfil its clients' demands at any particular time during a project is an essential factor in business transactions. Meeting the requirements and client demands will guarantee that the firm is perceived as a cooperative collaborator who is also capable of finishing the project as scheduled.

**Selecting the right supplier.** Based on the respondents, selecting the right supplier entails a number of measures, including negotiating to maintain the present rate or value or constantly obtaining the supply at a lower cost. The current negotiation is supported by leveraging long-term collaboration or prior agreements. This process continues until the company and its suppliers come to an agreement, and only worthwhile deals are made.

*We try to mitigate in terms of negotiating with the local Indian supplier to maintain the rates or reduce the rates due to our long relationship etc. (R8)*

*Qatar will advise us; we will discuss how to win the order and which bank to follow with the Qatar people. We still negotiate with the supplier until we agree on something with them. (R14)*

The respondents further explained the strategies and processes for selecting a supplier. The locals' perspectives will give insight into the complexities of arrangements with the supplier. As local culture significantly impacts this, businesses consult local experts about the best approach to negotiating with any local supplier. Also highlighted is the necessity of carrying out the procedures properly, including selecting the suitable bank. All these aspects are considered until an advantageous agreement is achieved.

The approaches mentioned by the respondents are not unexpected; several prior research has emphasised the significance of readiness as a control aspect of risk management. According to Hsiao et al. (2013), project managers are motivated to acquire quality mechanisms and information on the various risks inherent in the project, as well as how to manage those risks and react to the various measures taken by stakeholders within the context of the project due to the possible adverse impacts of risk. A number of earlier studies have emphasised risk readiness, concentrating on technical concerns, such as the chances of device component failure and the effects of failure on the machine (Amenawo et al., 2016; Ahmad et al. 2012; Stamtis, 2003).

Additionally, the interviews disclosed that the respondents implemented strategies to mitigate the effects of FOREX fluctuations in business management, including managing stakeholders properly, establishing standards for choosing a location, and having a transparent agreement.

**Manage stakeholders properly**. According to the respondents, effectively managing stakeholders is a crucial concept in mitigation efforts from their perspective of business management. Every stakeholder has an impact on cash flow management, consequently affecting how businesses operate.

*Business management… is managing the cash flow. So, you need the materials from the vendors to complete the work, but [you need them] to continuously supply you with a more extended period of payment. So, when we get a payment from the client, we disburse them …Finally, … upon completion, our colleague is paid for missing our equipment … If we transfer money from Malaysia, the rupee gets stronger. So, we’re going to lose a lot. So, we end up paying after we sell our equipment. That is how we manage our cash down there. (R8)*

*The way that we mitigate is obviously to manage the cash flow and the vendors to get a more extended [period of] credit (payment)… For instance, in one of the projects, we managed to [extend the payment period] up to 150 days… (R8)*

*Yes, after we discussed it with the client, the client said they could participate in the negotiation with the supplier. And then contractor, client and supplier met together to agree. (R14)*

Cash flows are the core of both operational and non-operational business activities. According to the respondents, the capacity of a firm to bargain with stakeholders, including suppliers, vendors, contractors, and clients, substantially impacts its earnings and loss. It suggests that determining the strengths and active responsibilities of each stakeholder is crucial for the firm's business management mitigation plan. When executing projects in foreign countries, these entities could possibly enhance or diminish the firm's chance to maximise profitability.

**Establish standards for choosing a location**. A firm must thoroughly understand the foreign exchange rates, processes, and local trade methods at the targeted site before embarking on a project internationally.

*…Because of the country. Because of the way they operated. Because of the local policy. Because of the way they work. If we are not into it, we may let them go. I’m not saying that there is no successful Malaysian business person in India. There are. But the way they [Indians] do business is the opposite of what we do. They do trading, even trading, also net trading. Payment comes first, like prepaid telephone. That is why MAXIS is there. ASTRO is there. You’ve got to understand the country business nature down there nowadays. (R8)*

One of the respondents emphasised that to prevent conflicts of interest, firms must be knowledgeable about the local policies in the foreign country where the project is located, which may differ from those practised in Malaysia. It entails a detailed discussion regarding the availability of local suppliers, goods, and labour, and payment methods. These insights gained in advance may assist the firm in avoiding a number of profit losses brought by improper business management while the project is being carried out.

**Have a transparent agreement.** The respondents stated the significance of establishing a contract that already comprehensively outlines all the terms and conditions, including the specifications of varieties and qualities of materials to be used and whether they may be sourced wherever the project is located.

*They are mentioned clearly in the contract document. They are going to give the specifications. The materials that you want to use. All the specifications will be stated. Otherwise, the quality is not acceptable. We must follow the specification. (R1)*

These arrangements serve as backup plans in the event of supply shortages or any disagreements on the quality of materials used, as noncompliance with any stipulated requirements will result in more expenses and a reduction in the business earnings. The respondents strongly advised that any contract or project terms and conditions have an apparent provision on FOREX. All parties associated with the project should be aware of any particular measures undertaken when coping with FOREX fluctuations.

*…The contract is relatively standard because India is a British colony. The contract is the same as in Malaysia. They still use FIDIC as their basis. Okay. International standard. But then, the construction organizations act is very protective. The construction organizations act down under the ministry of corporate affairs or trade. It is quite protective. The local’s interest. (R8)*

*Well, unfortunately, or fortunately, during that time, all our contracts are in their local currency—Indian rupees… That’s why I say the Indians are very protective and smart. All contracts are Indian rupees. (R8)*

*…our practice is to minimise the impacts. So, we managed all the costs. To minimise costs, the profit, you know, to the sub-contractor. So, everything is transparent. We know all the costs. Because we do everything, even from the casing, from engaging the sub-contractor, engaging the direct workers. At the end of the month, we calculate the cost compare it with the budget. We are still within the budget. It’s okay, so we can go on the following months until we do the final account. So, what is the budget, what is the cost, say there is a profit of 5 per cent? We will split 50 per cent to the subcontractor 50 per cent to \*Zeland. That is the modus nowadays. We called it Joint Endeavor Partnership, JEP. That is the way we minimise reduce the end cost. (R12)*

*The management team [is] in Malaysia. Foreign member in the management team. Sub-contractor [is] also Malaysian. And then, at that time, not many subcontractors were willing to go to Saudi. So how we design the contract is not like a normal contract where you have to sub-contract, give everything the portion of work. We come out with a budgeted price for the sub-contractor, let’s say, for \*Rc, the work portion budgeted says 50 million. So, the sub-contractor will take this 50 million. They called it a Joint Endeavor Partnership. Joining with us in all the costs we will pay, there is some saving from the 50 million at the end of the day. They will share 50-50. (R12)*

The firm is spared from profit loss if the necessary precautionary measures are taken beforehand.

*…We felt the impact, but it was not catered for in the contract. So, if that happens, we have to absorb [the loss]. (R13)*

1. **Conclusions and Recommendations**

The data analysis suggested mitigation measures at the project and corporate levels that firms might implement during FOREX fluctuation and as an extra measure for international construction projects. At the project level, hedging is the most frequently used and effective mitigation method of lowering risk associated with FOREX fluctuations. This strategy specifies foreign exchange rates agreed upon by all parties concerned. Other mitigation strategies include locally sourcing raw materials, bringing in dedicated, skilled labour, properly managing the customer, and selecting the right supplier, which will assist the construction firm in regulating the operational expenses of projects in the host nation and reduce its vulnerability to FOREX fluctuations.

Several recommendations at the corporate level were also mentioned. Firms should also properly manage the stakeholders essential for the project's advancement, particularly pertaining to financial investments. Firms should establish standards for choosing a site and have an in-depth comprehension of the local culture to prevent miscommunication and poor labour management, which will prevent cost overruns and project delays. Companies also should have a clear agreement and enter joint ventures with companies abroad by implementing shared control. Future studies may examine the longitudinal impacts of FOREX fluctuations in a few case studies to investigate how construction companies implement mitigation measures during FOREX fluctuations in a real environment.

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*Declaration*

I hereby declare that the information presented in this research is accurate and correct to the best of my knowledge at the time the study was conducted. All data, findings, and interpretations reflect the conditions and circumstances during the research period.

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