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**RESEARCH ARTICLE**

# A Qualitative Perspective to Analyse External Risks Impact on Thailand's Real Estate Sector

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**ABSTRACT**

This study aims to identify external risk factors that impact Thailand real estate industry, and evaluate the risks associated with real estate development in the country, particularly in light of current economic uncertainty and the COVID-19 pandemic, the paper effectively addresses an essential and current issues. Semi-structured interviews were conducted with 15 key informants from various real estate developers across different regions in Thailand. The likelihood and impact of each risk were used to calculate a risk score. The findings indicate that most of the risk factors affecting Thai real estate companies are prevalent and have a significant impact. The Thai Financial Exchange's Risk Management Framework indicates that five risk factors (risk index ranging from 14.01 to 25.00) pose a very high level of risk for the Thai real estate sector. These include a decrease in consumer purchasing power in the current economic environment, an increment of land and building taxes leading to increased real estate prices, constraints on land planning practices, limited credit availability due to intense competition, and delays in project approvals. The economic and legal factors associated with these risk factors are beyond our control and cannot be prevented. In addition, this paper highlighted the necessity of efficient risk mitigation techniques adapted to the developers' particular risks and also provides them with useful risks' prevention techniques.

## INTRODUCTION

Currently, Thailand's real estate market is in a contractionary phase and is characterised by high volatility as a result of global economic recession, domestic and international political instability, and strict credit approval policies by financial institutions for both developers and consumers. Thailand's real estate market, including residential and commercial construction, has also been negatively impacted by the global pandemic of Coronavirus disease 2019 (COVID-19), especially in the travel and tourism sector. In addition, the "new normal" phenomenon has transformed the lifestyle of real estate buyers as well as their leisure activities (TDRI 2020). Commercial and service property developers, especially those in the large and mid-sized sectors, are also affected by this phenomenon, as consumers' lifestyles are changing. It is necessary to respond to changes in people's lifestyles, which requires spending more resources, time, and money (REIC 2022). The situation in Thailand's real estate industry depends on various external factors. In summary, the entire industry is facing significant challenges. Real estate development in Thailand is often influenced by external variables

that can change, such as PESTLE factors (political, economic, sociocultural, technological, legal, environmental) that regularly influence decision-making in project development (Wood, A. 2022). On the subjective characteristics of external risk factors, the impact of a risk can only be assessed by analysing its probability of occurrence and its consequences (Bell, M. 2021). The COVID-19 pandemic crisis and economic downturn have prompted several major developers to develop risk management plans, but these plans were tailored specifically for their businesses. These regulations were created, but not published, and are too broad to apply to Thai real estate businesses. Since even small and medium-sized developers lack the resources, funding, and experience to create effective risk management plans, they are highly vulnerable to the uncertainty of the real estate industry (TREA, 2021). To manage the impact of any risks, Thai real estate developers should be able to understand risk management procedures, including risk identification and risk assessment processes.

Regarding the aforementioned risky situation of the Thailand real estate sector, it prompts the formulation of the following research questions: 1) What are the primary risks affecting Thailand's real estate sector? 2) How do Thai developers assess the level of risk associated with their projects? Additionally, this study acknowledges the evolving natural and social landscapes, which amplify project risks. Utilizing extensive data from Thailand's real estate sector, the study aims to define a comprehensive understanding of risks and pinpoint the most critical ones.

## MATERIALS AND METHODS

The risk assessment process typically prioritizes risks with the highest impact to better manage or reduce their impact. Additionally, the results of the risk assessment process typically indicate the severity of the risk impact and the probability of its occurrence. In Smith's (2002) and Valis D., and Koucky (2009) recommendations, the evaluation process helps to determine both the likelihood and potential consequences of risks.

### Research Approach and Methodology

Due to the subjective nature of risks associated with real estate operations, determining the exact cause and effect of each risk can prove difficult. This study also aims to investigate subjective and personally perceived risks within the real estate development industry (Hillson & Murray 2011, Redmill, 2002, Lausberg et al., 2021). Risk assessment is an opportunity to examine the causes and effects of risks, both positive and negative impacts, and to consider the likelihood of possible outcomes. Thus, it is necessary to identify the factors that influence the impact and its probability of occurrence, compare the risk level derived from the risk analysis with the risk tolerance level, and if the risk level is not within the risk tolerance level, appropriate actions should be taken to mitigate the risk.

Then, the authors decided to use a qualitative research approach to understand and highlight Thai developers' perspectives on external risks associated with real estate projects. We are aware of the limitations inherent in this situation and apply a qualitative research methodology. In the first step, external risk assessment criteria are created based on the STEPLE factors (see Table 1) and incorporated as variables in the risk assessment process.

The personal interview technique was chosen as the means of data collection. This information was used due to informant accessibility and time constraints. The authors employed the semi-structured interviews with key informants from various regions of Thailand that enhance reliability of data and offer insightful information about the real estate industry. An interview protocol was developed and distributed to the selected key informants. The interview transcripts themselves explore the extent to which informants' perceptions vary about the outcomes and probabilities of different risks and are divided into two parts: 1) informant demographics, and 2) internal risk assessment criteria. It is divided into 48 proposed variables that make up the form.

Fifteen key informants were selected for this study, which was adequate to gather insightful information for the further qualitative content analysis Muellmann, S., Brand, T., Jürgens, D. et al (2021). After the key formants were contacted and appointed for interview, an interview record was developed, together with a series of additional questions were developed in addition to those asked during the interview based on the criteria outlined in the following section for risk assessment. Besides those interviewing questions, additional risk assessment questions were developed based on the criteria outlined below.

The real estate risk assessment criteria were formulated based on extensive literature review and pilot study suggestions. These showed that such risks have considerable influence over project actions at every stage of their realisation, unlike STEPLE elements (Bush, 2019). Thus, both quantitative and subjective risk assessment indicators were selected based on the evaluation criteria with supporting factors. For instance, evaluation method/technique as well as the criterion referring to previous research. These criteria were composed of six fundamental standards (as per STEPLE factors) and their 24 sub-criteria. The following section is going to briefly discuss each STEPLE factor as well as the risk assessment criteria, which will be illustrated in Table 1.

**Table 1. Summary and critical analysis of risk assessment criteria**

| STEPLE | No. | Sub criteria | Variables name | Approaches to evaluation | References |
|---|---|---|---|---|---|
| Social Impact | *1* | Life in the New Normal | SO-01 | A person's total number of hours or days spent at home. | TDRI (2020) |
| | *2* | The needs of the community and social services | SO-02 | Balancing development of real estate projects with community needs. | Waters (2023) |
| | *3* | Discourse in the local community | SO-03 | Understanding of the objectives of the project by stakeholders | Kasemsuk (2018) |
| | *4* | Distancing based on a social and physical perspective | SO-04 | Expenditures necessary to accommodate such measures about the size of the building. | TDRI (2020) |
| | 5 | Health and Safety | SO-05 | The extent to which the project impacts the health and security of the community | Trinh and Feng (2019) |
| | 6 | A change in lifestyle | SO-06 | A customer's perception of how products are perceived | Beamish et al. (2015) |
| Technology Impact | 1 | The ability to use technology effectively | TE-01 | Understanding of different technologies and levels of accessibility | International Technology Education Association (2000) |
| | 2 | Management of facilities | TE-02 | Intensity and complexity of amenity management. | Sia et al. (2018) |
| | 3 | The disruption of technology | TE-03 | Disruptive technologies impacting real estate projects | Deloitte (2016) |

**Table 1. Summary and critical analysis of risk assessment criteria (continued)**

| STEPLE | No. | Sub criteria | Variables name | Approaches to evaluation | Reference |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Technology Impact (continued) | 4 | Qualitative and liability issues with contractors | TE-04 | In the event of the contractor abandoning the job or not providing quality work, the consequences are severe | Borvorn and Kunishima (2017) |
| Environment Impact | *1* | Disposal of waste and recyclables | EN-01 | Waste generated from the project every day, in tons (Tonnes) | Couch and Dennemann (2000) |
| | *2* | A report from the EIAR | EN-02 | Number of days required for approval of an EIA. | Environmental Impact Assessment Division (2020) |
| | *3* | The condition of the site | EN-03 | Environmental challenges that impact the development of a project. | Chen and Khumpaisal (2009) |
| Political Impact | 1 | Approval from the relevant authorities | PO-01 | Whether the local government has approved the project within the specified timeframe. | Flyvbjerg et al. (2003) |
| | 2 | Authorities with conflicting interests | PO-02 | Indicator of Transparency | Wang and Xiang (2019); Transparency International (2018) |
| | 3 | Conflict between the project's interests and the interests of the public | PO-03 | The duration of public hearings and the days that have been delayed for the project | Pellman (2008) |
| Legal Impact | *1* | Changing the land use plan | LE-01 | In the event of a violation of land use planning, damages or contract penalties may be awarded. | Ratanawaraha (2016) |
| | *2* | The impact of Land and Buildings Tax Law | LE-02 | Amount of tax payment, and the understanding towards this law. | Ministry of Finance (2019) |
| Economic Impact | *1* | A lack of funding or Funding insufficiency | EC-01 | The source and interest rate of the funds. | Adair and Hutchison (2005) |
| | *2* | Fluctuations in the capital cost of a project | EC-02 | An increase or decrease in the interest rate on a loan | Kiradoo, (2019) |
| | *3* | Fluctuations in land prices | EC-03 | Appraisal price for the government land | Liu, Wang, and Zha (2013) |

| | | | | | |
|---|---|---|---|---|---|
| | *4* | Utilisation of land to the greatest possible extent | EC-04 | Analysing the investment profit versus the cost of land acquisition. | Hargrove, (2023) |

**Table 1. Summary and critical analysis of risk assessment criteria (continued)**

| STEPLE | No. | Sub criteria | Variables name | Evaluation methods | Reference |
|---|---|---|---|---|---|
| | 5 | Trade area with a competitive environment | EC-05 | Competition within the same market. | Adair and Hutchison (2005) |
| | 6 | Availability of affordable products for customers | EC-06 | Customer power to purchase/ and rent | Adair and Hutchison (2005) |

The risk assessment criteria were specifically developed and tailored for Thailand's business environment considering the COVID-19 pandemic and economic downturn. These were formulated based on input from both practitioners and academics. Each criterion is structured into two parts: "risk consequence" and "risk likelihood," which align with the risk definition provided (Table 2), according to the risk definition (Rusu and Illinca, 2018):

$$Risk_n = C_n \times L_n \quad (1)$$

Where C = consequence of risk, L = likelihood of risk.

Therefore, the risk criteria contain 24 sub-criteria and consist of 48 variables; these criteria are afterwards converted into questionnaires which are then used as research tools in conducting interviews with selected informants (15 Thai real estate professionals).

The authors classified likelihood and impact levels of risk factors into five levels to assess the magnitude of risks, with 1 being very unlikely or having an impact and 5 being highly likely or having an impact, the author considered the severity and probability level of Thai real estate Risk factor. The authors employed the Likert scale technique that subdivided each minor range into five sections for data analysis (Brown, S. 2010). Then, the chance that each risk factor will occur is multiplied by its level of impact to give the value for each risk. This made it easy to compare risk levels because their determination was based on this idea. The following four classes can be distinguished (Stock Exchange of Thailand (SET) 2020).

**Table 2 – The overview of the risk level**.

| Degree/ Intensity of risk | Risk score |
|---|---|
| Very High (VH) | 16.02-25.00 |
| High (H) | 10.03-16.00 |
| Moderate (M) | 6.03-10.00 |
| Low (L) | 1.03-6.00 |

This study also looked for the most effective method for obtaining a large amount of validity and reliability data. To validate the data gathering, the authors then used the "triangulation" technique. Triangulation is a common technique for enhancing the validity and reliability of research or the assessment of findings, according to Delve & Limpaecher, A. (2023). To fully comprehend a topic, we aimed to apply data triangulation in this study, which is the process of using several data sources, including observations, interviews, and documents. Prior to conducting the interviews, we sent our

interview records to three real estate industry professionals to confirm the validity of the research instrument (the Content Validity Index, or CVI). All three experts expressed agreement with the interview records' structure. To identify the risks associated with Thai real estate and to evaluate the seriousness of each risk, content analysis was used to examine the interview data.

**Key Informants**

The key informants in this study were selected based on their expertise, skills, experience, and their pivotal role in decision-making regarding risk management within their projects (See Table 3). These informants are actively involved in the development of projects, both residential and commercial, situated in the vicinity of Bangkok and other major cities in Thailand, which are known for their significant volume of real estate development projects (REIC, 2019). As the interview transcript included planned questions, the informant's perspective, current risk assessment methods, and empirically based methods of assessing the risks could be explored during the interview process (other comments and future research). Several interviewees also suggest useful techniques to mitigate the impact of risks.

The characteristics and the qualifications of the said informants were also highlighted, and listed in Table 3, this demonstrates their suitability and reliability as research participants. To uphold research ethics, their identities were kept confidential to protect their personal information and trade secrets.

**Table 3: Profiles of the informants**

| Informant | Position | Experience in real estate industry (year) | Project type | The approximate value of the project (M Baht) | The region (Thailand) |
|---|---|---|---|---|---|
| 1 | Founder/Proprietor | Twenty-six | Low rise/ High rise / Hospitality | 10,000.00 | Northeastern |
| 2 | Founder/Proprietor | Seventeen | Buildings with low or high rises | 1,500.00 | Bangkok Metropolitan |
| 3 | Executive | Seven | Buildings with low or high rises | 1,000.00 | Bangkok Metropolitan |
| 4 | Founder/Proprietor | Seventeen | Low rise | Prefer not to say | Southern |
| 5 | Executive | Twenty-three | Hotel/ Services Apartment | 100,000.00 | Bangkok Metropolitan |
| 6 | Founder/Proprietor | Twenty | Buildings with low or high rises | 30,000.00 | Bangkok Metropolitan |
| 7 | Founder/Proprietor | Twenty-five | Buildings with low or high rises | Prefer not to say | Northeastern |
| 8 | Founder/Proprietor | Thirty-four | High rise | 500.00 | Bangkok Metropolitan |

| Informant | Position | Experience in real estate industry (year) | Project type | The approximate value of the project (M Baht) | The region (Thailand) |
|---|---|---|---|---|---|
| 9 | Founder/Proprietor | Thirty | Low rise/ High rise / Rental | 10,000.00 | Northern |
| 10 | Founder/Proprietor | Forty | Buildings with low or high rises | 20,000.00 | Bangkok Metropolitan |
| 11 | Founder/Proprietor | Fifteen | Low rise | 500.00 | Northeastern |
| 12 | Founder/Proprietor | Ten | High rise | 300.00 | Northern |
| 13 | Founder/Proprietor | Fifteen | High rise | 1,000.00 | Northern |
| 14 | Founder/Proprietor | Fifteen | Low rise | 400-500 | Northeastern |
| 15 | Founder/Proprietor | Eleven | High rise | 300.00 | Northeastern |

The table above indicates that everyone qualifies as a research informant for this study because they have experience in risk management issues, have held top managerial positions in companies involved in projects, and possess a strong background in risk management. They are decision-makers with ultimate power during such times.

The authors seriously concerned on the ethics of using human subjects in our research as well as to protect each interviewee's trade confidentiality. Therefore, on November 5, 2020, we received an approval to conduct the research with the human subjects with Research code: 093/2020 and Certificate No. 086/2020 from Thammasat University's Human Research Ethics Committee, after sending the research proposal and the example of interview records to Thammasat University's Human Research Ethics Committee.

## RESULT AND DISCUSSION

Risk scoring involves averaging mean scores for all variables (both impact and likelihood), weighted by multiplying each variable's impact and likelihood. Table 4 provides insight into how the Thai Real Estate industry is ranked based on risk levels, including associated risk scores and interview questions. This resulted in risk levels being sorted from highest to lowest, regardless of the STEPLE classification. The top five risks that have a risk score of more than 14 (High and Very High risks) were explored and investigated in this section. (Other risks will be shown in Exhibit 1)

**Table 4: Levels of STEPLE risks in Thailand's real estate sector**.

| Rank | Variables | Interview Questions | Consequence (1) | Likelihood (2) | Risk scores (1) x (2) | Risk level |
|---|---|---|---|---|---|---|
| 1 | EC-06 | Purchases or rentals are not affordable for customers | 4.530 | 4.330 | 19.640 | VH |
| 2 | LE-02 | A project's cash flow is impacted by land tax law | 4.200 | 3.870 | 16.240 | H |
| 3 | LE-01 | Progress of the projects about the Land Planning Act | 4.420 | 3.330 | 14.720 | H |

| Rank | Variables | Interview Questions | Consequence (1) | Likelihood (2) | Risk scores (1) x (2) | Risk level |
|---|---|---|---|---|---|---|
| 4 | EC-05 | High competition in the same trade area. | 3.800 | 3.730 | 14.190 | H |
| 5 | PO-01 | The delay in receiving approval from the appropriate authorities. | 3.710 | 3.790 | 14.060 | H |

In Exhibit 1, 11 risks are classified as high or very high based on the scale, the EC-06, EC-05, and EC-03 variables fall under the Economic Risk category, and the PO-01, PO-02, and PO-03 variables fall under the Political Risk category. A total of two variables were included to represent Legal Risks (LE-02 & LE-01), along with three other variables representing Environmental (EN-02), Social (SO-01), and Technical (TE-02) risks. This aligns with TREA (2021) 's findings, where they noted that Thai real estate developers extensively consider the impact of economic factors on their projects' risks but pay little attention to socio-cultural risks.

The highest risk identified was labelled EC-06 "Customers cannot afford to buy or rent" (19.640). This risk stemmed from the Bank of Thailand implementing the Loan to Value (LTV) Policy, which limited the amount of housing loans accessible to customers. To purchase a house, customers were required to make a down payment of at least 10%, and financial institutions demanded they pledge their properties as mortgages. Any slight changes in loan conditions, such as an increase in interest rates or alterations in the length of instalment payments, directly impacted consumer affordability and, consequently, developer incomes (O' Toole and Slaymaker, 2021).

There is a second highest risk attached to LE-02, also known as "Impact of Property Tax Laws on Project Cash Flows." A common practice among developers, particularly those involved in low-rise projects, is to purchase extensive land parcels ahead of time and begin the development process as soon as possible. Regardless of whether the government can put off the development plan due to the current economic conditions (2021-2022), developers will still be liable for fixed asset and building taxes (2020) amounting to 3.00% of its projected costs. The cost of the project will rise as a result, and it will have an impact on its overall cash flow.

Due to these changes, the project's cost will increase, and its cash flow will be adversely affected. In some regulations, such as the BMA Land Planning Act (2013) and the Building Regulations Act (1992), certain limits are stipulated, such as the floor-area ratio (FAR). The customer had the best options, but these were not sufficient to meet the developer's maximum requirements. This impacted the conceptual and detailed design of the project, such as B A larger unit area or greater facility area. As these regulations, locations, and land prices influence whether a product will meet the relevant standards, this was considered to be a direct influence on the product's detailed design.

Another economic risk is "intense competition within the same trade area" (EC-05). As part of the research, all informants were asked about the level of competition among local, large, and foreign developers. In addition to direct competitors, developers compete with indirect competitors including rental properties and existing homes. Furthermore, informants highlighted competitive risks and their impact. Competition influences the sales volumes and price forecasts of real estate marketing plans, strategies, and demand forecasts.

In terms of impact, PO-01 was the fifth most significant risk. Financial institutions will be required to pay companies higher interest rates if approval processes take longer. As the approval process takes longer, the project schedule is at risk (Flyvbjerg, 2003). Furthermore, delays in approving the start

of a project were a major concern for Thai developers. The longer the time spent in this area, the greater the delay in construction, the larger the schedule change, and the greater the impact on project finances. As discussed in the previous section, the five high-impact risks are caused and affected by a variety of factors. In addition, customers may not be able to afford housing prices, property tax laws may affect the costs of construction, zoning laws may restrict development, and intense competition in the industry may delay the start date of construction. As part of the construction process, these risks are EC-06, LE-02, LE-01, and PO-01, respectively. Based on the interviews, each informant considered how these risks might impact the progress of their project. In addition to the five risks, the informants were given some recommendations to reduce their impact.

## REAL ESTATE RISKS MITIGATION

To mitigate the impact of the said risks, several suggestions have been raised by the informants regarding EC-06, the developers should consider marketing segmentation and commercial placement to reduce these sales barriers. Proper research has allowed us to set a fair price for the products so they can assess or assess affordability for our customers. These studies allowed developers to know the true affordability of their customers and helped them understand the cost of their products. In addition, developers can help customers deal with financial institutions that offer favourable mortgage terms, such as auspicious loan rates and long-term repayment plans.

The new property tax (LE-02) had a significant impact on cash flow. The interviewees advised developers to accelerate inventory building, especially for projects with high estimated asset value Based on LE-02, the new property tax negatively impacted cash flow. A tax plan must be developed to reduce the tax burden and determine how much tax needs to be paid. When eviction rates drop, rental property owners should invest in upgrading their buildings to increase rental income, especially if the current rental price does not fully express the property's potential.

To reduce the impact of LE-01, informants suggested that designers need to fully understand the constraint boundaries and customer requirements so that they can properly define the project concept and functionality. On the other hand, products can also be modified on-site to take into account customers' individual needs and lifestyle changes. Comprehensive design updates are required to improve product quality and ensure compliance with regulations and customer needs.

Regarding EC-05, informants recommended competitor or solid marketing research as a tool to address these risks. However, the marketing plan requires the owner to clearly define the target market and explain how their product differs from those of their competitors. It is necessary to highlight the following advantages: For example best quality, best location, etc. Market research can be used to categorize the capabilities of your competitors. This study includes information on the number of competitors, areas of expertise, product categories, and other project assignments to improve the effectiveness of competitor assessment.

For PO-01, interviewees stated that each authority has its criteria for evaluating approval document submissions, so developers should review each authority's relevant regulations and additional requirements before initiating the approval process. They suggested that the said process needs to be thoroughly checked.

## CONCLUSION AND SUGGESTION

The purpose of this study is to assess the impact of STEPLE factor risk on the Thai real estate industry. The authors used qualitative research methods using semi-structured interviews and risk assessment calculators. Fifteen real estate professionals from each region of Thailand were selected as key informants to express risk awareness and work on risk assessment. This study identified particular external risk factors that are significant and have an impact on Thailand real estate sector as well as suggests the developers to prioritise the following five issues as major risk factors: In the

current economic environment, consumers have less purchasing power. Land and construction taxes that affect to the increase land acquisition costs, limit the application of land planning laws, reduce inventory liquidity due to intense competition, lengthen project approval processes, as well as how COVID-19 affected Thailand's real estate market, both during the construction stage due to a lack of workers and during the selling and handover stage, when it was discovered that buyers lacked sufficient purchase or rental power.

Informants also provide advice on how to mitigate these critical risks and gain a deeper understanding of the industry, including demand, customer potential, affordability, and the number, size, and nature of competitors. It was recommended that a thorough feasibility study be carried out. They advised developers to accept the legal risks and advised that a thorough feasibility study would help developers identify legal conditions that would prevent the project from being developed.

There may be other unforeseen risks in Thailand's real estate development industry. However, the risk assessment criteria for this model were primarily developed based on the authors' extensive literature analysis and experience. Further research is needed to establish comprehensive and up-to-date risk assessment criteria based on Thailand's current political and economic situation. Furthermore, this study selected only a small number of key informants and may not accurately reflect how all Thai developers perceive risk in order to understand the many perspectives in this industry, particularly from smaller developers who may have a variety of experiences and property types, it is recommended that future study include a larger number of key informants.. On the other hand, the future researchers may use quantitative methods, such as questionnaire distribution and statistical tools, for different types of real estate projects to obtain more accurate risk assessments and adjust and improve risk analysis standards. It is recommended to gather a large amount of information from Thai experts working on the special characteristics of Thailand's real estate industry.

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**EXHIBIT 1**

| Rank | Variables | Interview questions | Consequence (1) | Likelihood (2) | Risk scores (1)x(2) | Risk level |
|---|---|---|---|---|---|---|
| 1 | EC-06 | Customers can't afford to buy or rent | 4.530 | 4.330 | 19.640 | VH |
| 2 | LE-02 | The impact of land tax law to the projects' cashflow | 4.200 | 3.870 | 16.240 | H |
| 3 | LE-01 | The impact of land planning act to the projects' progress | 4.420 | 3.330 | 14.720 | H |
| 4 | EC-05 | High levels of competition in the same trade area. | 3.800 | 3.730 | 14.190 | H |
| 5 | PO-01 | The delay in receiving approval from the appropriate authorities. | 3.710 | 3.790 | 14.060 | H |
| 6 | EN-02 | Delay in EIA approval and its impact on project progress | 3.820 | 3.550 | 13.540 | H |
| 7 | PO-02 | The process of obtaining various permissions is complicated and opaque, which encourages local corruption. | 3.640 | 3.710 | 13.530 | H |
| 8 | PO-03 | Local or urban development regulations have an impact on project development | 3.750 | 3.330 | 12.500 | H |
| 9 | EC-03 | The cost of purchasing the land is excessive. | 3.360 | 3.360 | 11.270 | H |
| 10 | SO-01 | The New Normal scheme has an impact on customer affordability. | 3.470 | 3.130 | 10.860 | H |
| 11 | TE-02 | Complications in facility/property management and after-sales services | 3.130 | 3.200 | 10.030 | H |
| 12 | EN-03 | The project site is in poor condition,and improving it will cost more money and time. | 3.070 | 3.130 | 9.610 | Mo |
| 13 | EC-01 | The lack of funding sources for the project | 3.270 | 2.980 | 9.580 | Mo |

| Rank | Variables | Interview questions | Consequence (1) | Likelihood (2) | Risk scores (1)x(2) | Risk level |
|---|---|---|---|---|---|---|
| 14 | EC-02 | Repaying loans to financial institutions carries a heavy strain. | 2.860 | 2.930 | 8.370 | Mo |
| 15 | TE-04 | The project's contractors and designers are not of contractual quality. | 3.000 | 2.670 | 8.000 | Mo |
| 16 | EC-04 | The developers' purchased land won't be used to its fullest potential. | 2.930 | 2.710 | 7.950 | Mo |
| 17 | TE-01 | Employees on the project lacked technological literacy and understanding. | 2.530 | 2.800 | 7.090 | Mo |
| 18 | TE-03 | The impact of technological disruption on project progress. | 2.670 | 2.470 | 6.580 | Mo |
| 19 | EN-01 | The project generates waste and impact to surrounding community | 2.270 | 2.400 | 5.440 | L |
| 20 | SO-04 | The concept of Social/Physical Distancing has an impact on the project's sellable/common area. | 2.400 | 2.070 | 4.960 | L |
| 21 | SO-06 | Customers' Lifestyle change | 2.540 | 1.790 | 4.550 | L |
| 22 | SO-02 | The conflict between project interest and the surrounding community | 1.800 | 1.800 | 3.240 | L |
| 23 | SO-03 | The project's lack of community communication/ | 1.710 | 1.790 | 3.060 | L |
| 24 | SO-05 | The impact of project development on community wellness and hygiene. | 1.640 | 1.820 | 2.980 | L |