International Journal of Organizational Innovation

RISK ASSESSMENT OF IMPLEMENTING PROJECTS IN CHINA

Ching-Sung Lai Department of Industrial Management, I-Shou University, Taiwan Email: cslai@isu.edu.tw

Abstract

Due to the trade and technology conflicts between the United States and China, investment uncertainty in China is much higher than before. This study aimed at analyzing the risks and factors that may be encountered when implementing projects in China. Analysis of Variance and Analytic Hierarchy Process were used to assess the petrochemical plastic, electronic components, steel metal, semiconductors, shoes, food, and trade channel industries. Five dimensions – social, management, political-economic, law-finance, and project are included in this study. The results suggest that employee recruitment, site selection, operations management, coordination mechanism, political and economic status, financial situation, law, project team, and controlling are major risk factors in the project. At the end of this study, some suggestions for investing in China are provided.

Keywords: China, Risk, Project, Investment, Assessment

Introduction

China has rapidly become a global economic powerhouse in recent years, and as a result, the country has become an attractive destination for investors looking to capitalize on its growth potential. China was the largest recipient of foreign direct investment (FDI) in 2020, attracting \$163 billion in inflows, despite the COVID-19 pandemic. And in 2021, China continued to attract significant FDI inflows, with \$149 billion in the first half of the year (UNCTAD 2022). China, as an emerging market, has a relatively higher market growth rate, and lower labor and land costs compared with developed countries. According to data from the World Bank and IMF, China's annual GDP growth rate averaged 9.6% between 2001 and 2010 and 7.9% between 2011 and 2020, making it one of the fastest-growing economies in the world (The World Bank 2022). This growth has been driven by a range of factors, including China's large and growing middle class, and a range of government policies designed to promote economic growth. In particular, China is becoming more open and with a vast domestic market demand since China joined the WTO. Besides, China has the advantage of a complete supply chain that play an essential role in attracting foreign investment and is known as the world factory.

However, the risks of investing in China cannot be ignored as the trade and technology disputes between the USA and China had become radical since 2018 and had affected the entire world (Zhang 2018, Goulard 2020). Although the trade delegations of the two sides have been negotiated several times, so far, the conflicts still exist, and the contradiction and tension between the two countries has not only been eliminated but increased.

Each country has its own development background, political policies, laws, and regulations. Some countries are relatively closed and have more control over political issues. Investing in China also comes with its own unique risks that investors need to be aware of. One of the biggest risk factors is political instability (Jiménez 2011). China is a one-party state, and this means that changes in government policies can have a major impact on the economy and the development direction. For example, a change in government policy towards a particular industry could lead to a sudden drop in the supporting power in that industry. This risk can be especially high for foreign investors (Quer et al. 2012), who may be less familiar with the country's political landscape and the potential impact of government policies.

In addition, investing in China could be complicated by the country's unique business culture and legal system although the Foreign Investment Law passed in 2019 (Foreign Investment Law 2019). The legal system in China can be opaque and difficult to navigate, which can make it challenging for investors to protect their interests. The business culture in China can also be different from what investors are accustomed to in other parts of the world (Quer et al. 2012), which can create challenges when it comes to negotiating deals and building relationships with Chinese partners when investing in China.

Since the breakout of COVID-19, the global economy has been severely affected. Depending on the situation of infection in various places, China has implemented lockdown policy to prevent the spread of the epidemic. With the extension of the lockdown, however, the well- intentioned act had influenced the regular daily life. Under some certain scenario, the factories have no choices but to shut down part of production lines or even the entire plant to decrease operational costs (Gan 2022). The citizen life was seriously affected and even lose their job which causes protests in some places. As a result, the investment risk could be increased and further impacted negatively.

Another risk factor when investing in China is the quality of financial reporting. While China has made great steps in recent years to improve the transparency and accuracy of financial reporting, there is still a long way to go. An example of this is that to make the economic indicator more brilliant, local banks encourage enterprises to continue loaning. As a result, some enterprises have secured funds and started or expanded their business. However, the ability to withstand the impact of economic turmoil is the key to sustainable operation. After all, once external economic shocks follow, loan pressure will make it more difficult for enterprises to survive. This can make it difficult for investors to get an accurate picture of the company's financial health, which can lead to a lack of trust in the market.

Economist (2022) mentioned that to suppress the real estate market, countries continue to raise interest rates. With the rise of interest rates, China's real estate market has been lacking momentum since 2021, which makes the situation of China's real estate market bubble more severe.

Despite these risks, China remains an attractive destination for investors looking to invest in a variety of industries. Overall, investing in China can be a lucrative opportunity for investors looking to diversify their portfolios and gain exposure to a range of industries. However, it is important for investors to be aware of the risks and to approach their investments in China with caution.

Literature Review

A project is an organizational activity established to accomplish a specific goal over a period of time (Larson and Gray 2020). The success of a project depends on how well it is managed, and a good project manager can help to minimize risk factors and ensure the project's success (PMBOK 2021). Risk is the probability of causing injury, damage, or loss (Chapman 1997). This definition treats risk as the probability of undesired events occurring and the degree of impact of these events on the outcomes (Rejda and McNamara 2019). Hence, project risk is called the possibility and degree of impact of a project's exposure to unfavorable conditions on planning objectives. These adverse conditions might have negative impacts on the scope, quality, time, and cost of the project plan.

Project risk brings uncertainty to the internal and external environment, so the

achievement of project goals may be affected (Smith 1998). Therefore, it is necessary to identify, analyze and respond to uncertain events or situations by establishing a systematic method to ensure that the project's goals can be achieved as scheduled (PMBOK 2021).

For a long time, prior papers discussed risk factors that have impacts on the investment and project. These factors included political stability, government policies, law, cultural background, and labor quality. The policies can have influenced the direction of economic development, encourage investment in certain areas and guide funds in that direction. Sethi and Luther (1986) made a point that one of the major uncertainties and risks involves political stability. And the political uncertainty in less-developed countries has a higher degree of influence on investment. Political stability does have an impact on economic activity. Chen et al. (2020) referred to the National Bureau of Statistics of China to investigate the influence of political uncertainty on firm entry and suggested that the effect of political turnover on firm entry is stronger for non-state-owned entrepreneurs and high-technology industries.

Culture is another risk factor in investment. Dang and Zhao (2020) pointed out that the potential cultural risk is different in different regions. The risk in the ASEAN is minimal while it is higher in Western Asia for a China Company to invest. China's historical clan culture can affect corporate behavior (Huang et al. 2022). Enterprises with a strong clan culture behave in a more conservative model and have a relatively stable business network and are unwilling to carry out

high-risk movements. Labor, in a project, not only constitutes a large portion of the overall cost (Gunduz and Abu-Hijleh 2020) but also play a significant role in the success of a project (Bakker et al. 2012). Husin et al. (2019) argued that labor quality is a decisive determinant of project success. Similar results can be found in the studies of Sabir et al. (2020) Their findings suggested that management competency is a key point to the success of a project and competence is counted on the labor quality. Earlier study by Elkington & Smallman (2002) focused on the trend of privatization of public utilities and conducted an in-depth discussion on project risk management for the British utility sector. The importance of project management was also mentioned in their study. From the literature above, it can be found that culture, labor, and management competency could be the risk factors that need to be considered.

In summary, China's market offers significant opportunities for investors but also involves risks that need to be managed effectively. Based on the above description, it is urgent to identify the related risk factors and the influences on project implementation.

Research Objectives

In order to explore the risks of investing and implementing the project in China, the objectives of this study are listed as follows.

1. Systematically considering the investment environment of China, analyzing the possible risks, and conducting a comparative assessment for reference.

- 2. Establishing the weights of the investment environment and risk assessment indicators for the basis of the analysis when implementing a project in China.
- 3. Using both the Analysis of Variance and Analytic Hierarchy Process to assess the investment risk in the industries of petrochemical plastic (PT), electronic components (EL), steel metal (ST), semiconductors (SC), shoes (SH), food (FD), and trade channel (TC).

Research Structure

The research structure is composed of three levels - dimensions, factors and question items. The first level contains five dimensions - social, management, political-economic, law and finance, and project. Each dimension has its risk factors. The numbers of risk factors in each dimension are four (S1-S4), two (M1-M2), two (PE1-PE2), four (LF1-LF4), and three (P1-P3). The total number of risk factor is 15. All the risk factors and questions are listed in Appendix. For instance, the risk factor in the social dimension (S) are the Background (S1), Employee recruitment (S2), Relationship (S3), and Site selection (S4). Six questions ae for Background (S101-S106), seven for Employee recruitment (S201-S207), four for Relationships (S301-S304), and 9 for Site selection (S401-S409). All the other factors and questions are listed in Appendix.

Data Collection and Statistical Analysis

The questionnaire comprises two parts. The first measures the respondents' perception of the dimensions, criteria, and risk factors. The second part includes ba-

sic information about the company and the project executed. All the measurements in the second part were nominal scales. 230 questionnaires were sent out through Google Forms and E-mail (Google Forms 171; E-mail 59) from Nov. 2021 to March 2022. The respondents are middle and high-level managers with experience in implementing projects in China. 155 valid questionnaires were collected (google Forms 98; E-mail 57). The collection proportion was 67.4% (Google Forms 57.3%; E-mail 96.6%). In terms of industries, the electronic component industry (34, 19%) is the majority. The collection ratios for other industries are petrochemical plastic 21 (14%), steel and metal 30 (19%), semiconductor 14 (9%), trade channel 18 (12%), shoe 11 (7%), and food industry 8 (5%) respectively.

Two stages of reliability and validity were employed. In the first stage, the validity for dimensions-factors is 86.6% and the reliability values (\cdot -value) are from 0.8929 to 0.9056. While in the second stage, the validity value for factors-questions is 84.5% and the reliability values (\cdot -value) are from 0.9744 to 0.9791. The results show that this questionnaire has very high reliability and validity in the construction of the risk assessment for implementing projects in China.

Residual values were used to indicate the data normality. The results show that the responses for the industries are normally distributed, and the variances among different industries are equivalent. Analysis of Variance was used to test the response differences among the industries. AHP was also used to constructs and rank the risk factor in this study. The relative weighted values of each risk factor were obtained and sorted through pairwise comparison.

Results and Discussions

Table 1 manifests the most vital risk factors and question items (shorted as Items) with a significance level of 0.05 for each industry sector. In the social dimension, Employee recruitment and site selection are the most significant for almost all industries except the semiconductor industry where the relationship is crucial as well. In the management dimension, both the operations management and coordination mechanism are crucial. Both the political and economic situations are the keys for the political-economic dimension. In the law-finance dimension, familiarity with the law and the financial situation of the company are listed as the most significant risk factors. As to the project dimension, team and project control are important.

The overall risk factors for all industries are summarized in Table 2. The most critical factors are as follows. "Operational ability and level of technicians", "Knowledge retention for specialized skills", "transportation convenience" and "obtaining the raw material" are crucial for the social dimension. "Expansion of the domestic market", "Negotiation mechanism" and "Price competition" are critical for the management dimension. In the political-economic dimension, "political stability and government policies", "Economic scale" and "Opportunity to enter the market" are most significant. While in the law-finance dimension, "Financial scheduling ability", "Capital re-

turn", and "knowledge of local investment law" are the most critical. The most crucial risk factors in the project dimension are "The ability to integrate the project", "Project team's support and cooperation with the manager", "Communication", "Quality control", and "Provision of the budget".

Ind	Social		Management		Political-Economic		Law-Finance		Project	
ma.	Factors	Items	Factors	Items	Factors	Items	Factors	Items	Factors	Items
рт	S4	S401 S404	M1	M105	PE2	PE202	LF4	LF402 LF404	D2	P301
11	S2	S205 S204	IVII	W1103			LF3	LF302 LF301	F3	P310
EL.	S2	S202 S204	M2	M204	PE2	PE202	LF4	LF404	P3	P301
	S4	S408 S401	IVIZ	11204	1.1.2	1 1202	LIT	LF402	15	P303
ST	S4	S401 S404	M1	M102	PF1	DE101	LF4	LF402	D7	P202
51	S2	S204 S207	1011	M101	1.2.1	1 2101	LF1	LF102 LF104	12	P206
SC	S3	S301 S302	M1	M106	DE1	DE10 /	IF1	LF102	D3	P301
sc	S4	S403 S402	1011	M105	TET	1 1 104		LF106	15	P303
SH	S4	S404 S401	M2	M204	PE1	PE101 PE102	IF1	L F102	D3	P308
511	S2	S202	1012	M203	PE2	PE202 PE204		LI 102	15	P310
FD	S4	S401 S404	M2	M205 M207	PE1	PE101 PE102	LF4	LF404 1 F402	P2	P202 P203
	S2	S206	M1	M105	PE2	PE202		LI 702		1 205
TC	S4	S404 S405	M2	M206 M205	PE2	PE204 PE202	LF4	LF404 LF403	Р3	P311 P303

Table 1. The most vital risk factors from ANOVA for each industry

Table 2. The most vital risk factors from ANOVA for all industries

Social		Manag	gement	Political	l-Economic	Law-F	Law-Finance Proj		oject
Factors	Items	Factors	Items	Factors	Items	Factors	Items	Factors	Items
S2	S202 S204	M1	M105	PE1	PE101 PE102	LF4	LF402 LF404	Р3	P301 P303 P310
S4	S408 S401 S404	M2	M204 M205	PE2	PE202 PE204	LF1	LF102	P2	P202 P206

The results from AHP are shown in Table 3. In the social dimension, employee recruitment and site selection are the two more significant risk factors extracted for almost all industries except for the semiconductor and food industry. In semiconductors, the relationship is crucial and in the food industry, the background is important. In the management dimension, both the operations management and coordination mechanism are crucial and the results are the same as that in ANOVA. Similar results also exist for the political-economic dimension and law-finance dimensions. The results from AHP show that familiarity with the law and the financial situation of the company are listed as the most significant risk factors. As to the project dimension, the team, project control, and project planning are critical.

Ind	Soc	cial	Management		Political-l	Economic	Law-Finance		Proj	ject
Ind.	Factors	Items	Factors	Items	Factors	Items	Factors	Items	Factors	Items
DT	S4	S401 S404	N/1	M105	DE2	DECOO	LF4	LF402 LF404	Р3	P301 P310
	S2	S205 S204	IVI I	M101	FE2	PE202	LF3	LF302 LF301	P1	P103 P104
EL	S2	S204 S202	M2	M204	PE2	PE201	LF4	LF404	Р3	P301
	S4	S408 S401	1112	M206	1 112	1 1201		LF402	10	P303
ст	S4	S401 S404	M1	M102	DE1	PE101	LF4	LF402	P1	P103 P104
51	S2 S204 S207	S204 S207		M101	FEI	PE102	LF1	LF102 LF104	P2	P202 P206
SC	S3	S301 S302	M1	M106	PE1	PE103 PE104	LE1	1 E102	P1	P104
	S4	S403 S402	INI I	M105	PE2	PE201 PE202			P2	P206 P203
сц	S4	S404 S401	M2	M204	PE1	PE101 PE102	I E 1	1 E102	P3	P308 P310
5П	S2	S204 S202	1012	M203	PE2	PE202		LF102	P1	P103
FD	S2	S206 S205	M2	M205 M207	PE1	PE101 PE102	LF4	LF404	P2	P202
	S1	S105	M1	M103	PE2	PE202		LF402		F203
ТС	S4	S404 S405	M2	M206	PE1	PE101	IF4	LF404	Р3	P311 P303
	S2	S207 S204	1012	M205	PE2	PE202	LTA	LF403	P2	P206 P207

Table 4 summarizes the overall risk factors of all industries extracted from AHP. The most crucial factors in the social dimension are "Knowledge retention for specialized skills", "The quality of labor", "Issues of obtaining the raw material", "Choice of a location", and the "Transportation convenience". "Expansion of the domestic market", "Quality variation" and "Business management model" are critical for the management dimension. In the political-economic and Law-finance dimensions, "Political stability and government policies", "Economic scale", "Opportunity to enter the market", "Financial scheduling ability", "Capital return", and "Knowledge of local investment law" are the most significant. The most crucial factors in the project dimension are "The ability to integrate the pro-

ject team", "Efficiency in completing the tasks", "Project cost control", and "Provi-

sion of the budget".

Social		Manag	gement	Politica	l-Economic	Law-F	inance	Project	
Factors	Items	Factors	Items	Factors	Items	Factors	Items	Factors	Items
52	S204	M1	M105	DE 1	PE101	IE4	LF402	D2	P301
52	S207	IVII	M101	PEI	PE102	LF4	LF404	P3	P308
	S408								D202
S4	S401	M2	M204	PE2	PE202	LF1	LF102	P2	P205
	S404								1200

Table 4. The most vital risk factors extracted from AHP for all industries

The overall risk criteria and factors extracted by ANOVA and AHP for all dimensions and industries are combined and illustrated in Table 5. The important findings from the results are summarized as follows.

- 1. In the social dimension: The "knowledge retention of specialized skills" and "The quality of local labor" are crucial in the background. "Choice of a location", "Transportation convenience" and "Obtaining of raw materials" are much more critical in site selection.
- In the management dimension: Both Operations management and Coordination mechanism are essential. The "Expansion of the domestic market" is important in operations management, while "Investors' understanding of the business management model" is more important than others in the coordination mechanism.
- 3. All the "Political situation" and "Economic conditions" are significant in the Political-economic dimension. In the "political situation" factor, "local political stability" and "Changes in local government policies" are most valued. The "Economy scale in production" is an essential requirement

when economic issues are considered.

- 4. In the "Law-finance" dimension, "Knowledge of local investment laws and regulations" are most valued. And the "Financial scheduling ability" and "Difficulty in recovering payment for goods" are two items that investors consider the most.
- 5. "Project team" and "controlling" are two major considerations in the project dimension. "The ability of project managers to integrate the teams" and "Provision of project budget" are relatively significant in the "project team" and "Controlling" factor.

Conclusions and Future Research

This study used ANOVA and AHP to evaluate the risks of investing projects in China. Seven kinds of industries are considered. This study obtained concrete risk indicators for each dimension. It is worth mentioning that these possible risk factors can be used as a reference for potential investors who want to invest and implement projects in China. Among these risk factors, knowledge retention and the quality of labor were mentioned in all industries, showing that manpower and knowledge are the basis of competitiveness.

Social		Mana	gement	Politica	ll-Economic	Law-I	Finance	Project	
Factors	Items	Factors	Items	Factors	Items	Factors	Items	Factors	Items
S2*	S204* S207 ⁻	M1*	M101 ⁻ M105*	PE1*	PE101* PE102*	LF1*	LF102*	P2*	P202 ⁺ P203 ⁻ P206*
S4*	S401* S404* S408*	M2*	M204* M205 ⁺	PE2*	PE202* PE204 ⁺	LF4*	LF402* LF404*	P3*	P301* P303 ⁺ P310 ⁺

Table 5. The overall risk factors extracted by ANOVA and AHP

*: The common risk factors extracted by both ANOVA and AHP

+: The risk factors extracted by ANOVA only

-: The risk factors extracted by AHP only

Twenty or thirty years ago, the major goal of Taiwanese businessmen investing in China was to take advantage of China's less expensive labor force to reduce manufacturing costs and enter the world. However, education in China has become popular currently. The middle class is increasing year by year and the consumption power becomes much stronger than before. The domestic market is even more active than the rest of the world. Investors should consider the possible risks to the domestic and export markets simultaneously.

According to the results, "Natural disasters" are not listed as a significant risk factor when implementing projects in China. Perhaps it is because the investors have already prepared in this regard, or perhaps China has appropriate responses to natural disasters in recent years.

Although China tried to make progress in different regions, China has a vast territory, and the degree of development varies from place to place. The coastal provinces or cities are advanced, while the inland areas are relatively backward. Since government policies will adapt according to development conditions, the focus of policy implementation will vary greatly over time. Even investing in a similar project at different times and places, the investors must pay special attention to the differences between them. It is recommended that investors need to respond carefully to changes and trends in various environments and make timely changes. Especially in recent years, the conflicts caused by international technological, economic, and trade are higher than that in previous years. Investors need to pay special attention to these issues.

The research limitations and future research are proposed as follows.

- 1. The industries categorized in the questionnaire are more than 20 in the beginning. The categories are reorganized because of relatively fewer responses from some industries. The final number of industries is seven in this study. Hence, the results for some industries cannot be revealed.
- 2. Some respondents expressed their concerns and hesitation about filling out certain questions. Therefore, feedback may affect the integrity of the questionnaires.
- 3. Some industries, such as the semiconductor chip, cloud computing, and artificial intelligence industries, are at the heart of the U.S.-China technology competition. Therefore, it is necessary to classify the semiconductor industry

in more detail and include cloud computing and AI in the following study to have a better understanding of these risks.

4. At the beginning of this study, the Russia-Ukrainian War had just occurred. The questionnaire did not include the impact of a war on the investment. However, there is no doubt that war plays a key determinant role in the changes in global production and supply chains. Future research can also consider this point.

References

- Bakker, K. D., A. Boonstra, H. Wortmann, (2012), Risk Managements' communicative effects influencing IT project success. International Journal of Project Managemtn, Vol. 30, no. 4, pp. 444-457.
- Chapman, C.B. (1997), Project Risk Management-Process, Techniques and Insights, 2nd edition, Wiley.
- Chen, S., H. Mao, Z. Feng (2020), Political uncertainty and firm entry: Evidence from Chinese manufacturing industries, Journal of Business Research, 120, pp. 16-30
- Dang, L. and J. Zhao (2020), Cultural risk and management strategy for Chinese enterprises' overseas investment, China Economic Review, Vol. 61, Article 101433.
- Elkington, P. & Smallman, C. (2002), Managing project risks: a case study from the utilities sector, International Journal of Project Management, 20,

pp.49-57.

- Goulard, S. (2020), The Impact of the US-China Trade War on the European Union, Global Journal of Emerging Market Economies, 12(1) 56-68
- Gunduz, M. and A. Abu-Hijleh (2020), Assessment of Human Productivity Drivers for Construction Labor through Importance Rating and Risk Mapping, Sustainability, doi:10.3390
- Huang, L. M. Ma, X. Wang, (2022) Clan culture and risk-taking of Chinese enterprises, China Economic Review, Vol. 72, Article 101763
- Husin, S., M. Mubarak, F. Fachrurrazi (2019), The Significance Risk for Factors of Labour, Material, and Equipment on Construction Project Quality, Aceh International Journal of Science and Technology. 106-113
- Jiménez, A. (2011). Political risk as a determinant of Southern European FDI in neighboring developing countries. Emerging Markets Finance and Trade, 47(4), 59–74
- Larson, E. W. and C. F. Gray, Project Management: The Managerial Process, 8th edition, McGraw Hill, 2020.
- Quer, D., E. Claver, and L. Rienda, (2012), Political risk, cultural distance, and outward foreign direct investment: Empirical evidence from large Chinese firms, Asia Pacific Journal of Management, 29, 1089-1104.
- Rejda, G. E. and Michael McNamara, Principles of Risk Management and In-

surance, 13th Edition, 2019, O'Reilly.

- Sabir, I., A. Mohsin, M. Majid, M.S. Mahmud, F. Nawaz, N. Sibir, (2020), Impact of Risk Management on Project Success with the Moderating Role of Managerial Competency, International Journal of Management Research and Emerging Science, Vol 10, No 4, pp. 11-21
- Sethi, S. P., K.A.N. Luther, (1986), Political Risk Analysis and Direct Foreign Investment: Some Problems of Definition and Measurement, California Management Review, Vol. 28, no. 2. pp. 57-68.
- Smith, J., (1998), Project Risk Management: Processes, Techniques and Insights, Journal of the Operational Research Society, 49(7), 769-770.
- The PMI Standard Committee (2021), A Guide to the Project Management Body of Knowledge (PMBOK), 7th edition, Project Management Institute.
- Zhang, Yuhan (2018), The US–China Trade War: A Political and Economic Analysis, Indian Journal of Asian Affairs, Vol. 31, No. 1-2, pp. 53-74

Websites:

- Foreign Investment Law of the People's Republic of China, <u>http://www.npc.gov.cn/englishnpc/c239</u> <u>34/202012/5b80fe5055504efa93b6744f</u> <u>9272b3c2.shtml</u>
- Gan, N., China's manufacturing hub Guangzhou locks down millions as Covid outbreak widens, CNN, Nov. 9, 2022 <u>https://edition.cnn.com/2022/11/09/chin</u> <u>a/china-covid-guangzhou-lockdown-intl</u> <u>-hnk/index.html</u>
- The Economist (2022), The world China wants, Oct. 15, 2022, <u>https://www.economist.com/weeklyedit</u> <u>ion/2022-10-15</u>
- The World Bank (2022), <u>https://data.worldbank.org/country/chin</u> <u>a</u>
- World investment report 2022, UNCTAD, June 9, 2022, <u>https://unctad.org/publication/world-inv</u> <u>estment-report-2022</u>

Dimension 1: Social (S)							
Risk factors	Question items						
Background	1. Local people's perception of foreign investors (S101)						
(S1)	2. Local living habits and customs (S102)						
	3. Differences with local language and culture (S103)						
	4. Natural disasters (S104)						
	5. Stability of labor market supply (S105)						
	6. Issues of regional discrimination (S106)						
Employee	1. Cooperation of operators (S201)						
recruitment	2. Operational ability and level of technicians (S202)						
(S2)	3. Employees' innovation and R&D capabilities (S203)						
	4. Knowledge retention for specialized skills (S204)						
	5. Overtime ratio of Taiwanese cadres (S205)						
	6. Ratio of local staff employment (S206)						
	7. The quality of local labor (S207)						
Relationship	1. Relationship with local government (S301)						
(S3)	2. Partnerships with local businesses (S302)						
	3. Relationship-based marketing channels (S303)						
	4. Cooperation with the local government (S304)						
Site selection	1. Choice of a location (S401)						
(S4)	2. Stability of energy supply (S402)						
	3. Stability of water supply (S403)						
	4. The convenience of transportation (S404)						
	5. Infrastructure of communication facilities (S405)						
	6. Communication fee (S406)						
	7. Difficulty in obtaining land (S407)						
	8. Difficulty of obtaining raw materials (S408)						
	9. Clustering of related industries (S409)						
Dimension 2: M	anagement (M)						
Operations	1. Variation of Product quality (M101)						
management	2. The degree of quality standard requirements (M102)						
(M1)	3. Channels for obtaining information (M103)						
	4. Speed of information acquisition (M104)						
	5. Expansion of the domestic market (M105)						
	6. Market share issue (M106)						
Coordination	1. The management autonomy in the local market through management control						
mechanism	(M201)						
(M2)	2. Strategies for entering the market (M202)						
	3. Investors' understanding of China's negotiation mechanism (M203)						
	4. Investors' understanding of the business management model (M204)						
	5. Price competition (M205)						
	6. Experiences in dealing with China and international markets (M206)						
	7. Fund coordination among joint ventures (M207)						
	8. Selection of local partners (M208)						
Dimension 3: Po	blitical-economic (PE)						
Political situa-	1. Local political stability (PE101)						
tion (PE1)	2. Changes in local government policies (PE102)						
	3. Local administrative efficiency issues (PE103)						
	4. The problem of local government intervention (PE104)						

Appendix. The Research Dimensions and Risk Factors

2023-1300 IJOI

https://www.ijoi-online.org/

Economic	1. The extent of exchange rate changes (PE 201)								
condition	2. Economies of scale in production (PE202)								
(PE2)	3. The range of price fluctuations (PE203)								
	4. Opportunities to enter the local market (PE204)								
	5. Local industry development trends (PE205)								
Dimension 4: La	aw-finance (LF)								
Law (LF1)	Law (LF1) 1. The conclusion of international institutions and treaties (LF101)								
	2. Knowledge of local investment laws and regulations (LF102)								
	3. The frequency of changes to the legal system (LF103)								
	4. Protection of intellectual property (LF104)								
	5. Illegal smuggling (LF105)								
	6. Clarity of laws and regulations (LF106)								
Operational	1. Restrictions on import and export (LF201)								
limitations	2. Foreign exchange control (LF202)								
(LF2)	3. Legal restrictions on foreign debt remittance payment (LF203)								
()	4. Nationalization or confiscation of assets and equipment of foreign companies in								
	the local area (LF204)								
	5. Extent of local preference given (LF205)								
	6. Efficiency of cargo clearance (LF206)								
	7. The degree of full exercise of corporate autonomy (LF207)								
Investment	1 Legally binding issues when investment is not performed (LF301)								
limitations	2 Infringement or interference with private treaties by local government (LF302)								
(LF3)	3 Issues of discriminatory treatment in laws and tax systems (LF303)								
	4 Problems of breach of contract (LF304)								
	5 Convenience of investment approval process (LF305)								
Financial	1 The extent of changes in the tax system (LF401)								
situation	2 Financial scheduling ability (I F402)								
(I F4)	3. The extent to which producers must do their foreign exchange balance (LF403)								
	4 Difficulty in capital return for goods (I F404)								
	5 Difficulty in borrowing funds (LF405)								
Dimension 5. Pr	roject (P)								
Planning (P1)	1 Project scale (P101)								
Training (TT)	2 Project complexity (P102)								
	3 Goal setting for project operation (P103)								
	4 Integrity of project design (P104)								
	5. Project contract type (P105)								
	6. Complexity of project technology (P106)								
Controlling	1 Conflicts with other projects in terms of resource allocation (P201)								
(P2)	2 Project quality control (P202)								
(12)	3 Project cost control (P203)								
	4 Control issues of project contracts (P204)								
	5 Acquisition of project technology (P205)								
	6 Provision of project hudget (P206)								
	7 Support for project-related activities (P207)								
Team (P3)	1. The ability of project managers to integrate the teams (P301)								
1 call (1 5)	2 Qualifications of project managers (P302)								
	2. Qualifications of project managers (1502) 3. The project team's support and cooperation with the project manager (P303)								
	4 Qualifications of project team personnel (P304)								
	5 Role definition of team members (P305)								
	6 Assignment of duties to Team Members (P306)								
	7 Workload of team members (P307)								
	8 Efficiency of team members in completing tasks (P308)								
1	10, Entering of team memory in completing tasks (1 J00)								

[9. Team members' attitude to accepting change (P309)
	10. Communication among team members (P310)
	11. The team's understanding of project procedures (P311)