Hindawi
Mobile Information Systems
Volume 2023, Article ID 9780154, 1 page
https://doi.org/10.1155/2023/9780154

*Retraction*

# Retracted: Risk Analysis of Enterprises' Investment in Infrastructure in Developing Countries Based on Structural Equation Model

**Mobile Information Systems**

Received 25 July 2023; Accepted 25 July 2023; Published 26 July 2023



This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope
(2) Discrepancies in the description of the research reported
(3) Discrepancies between the availability of data and the research described
(4) Inappropriate citations
(5) Incoherent, meaningless and/or irrelevant content included in the article
(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

## References

[1] H. Lu and L. Wang, "Risk Analysis of Enterprises' Investment in Infrastructure in Developing Countries Based on Structural Equation Model," *Mobile Information Systems*, vol. 2022, Article ID 4790726, 7 pages, 2022.

Hindawi
Mobile Information Systems
Volume 2022, Article ID 4790726, 7 pages
https://doi.org/10.1155/2022/4790726

*Research Article*

# Risk Analysis of Enterprises' Investment in Infrastructure in Developing Countries Based on Structural Equation Model

**Hongbo Lu[1] and Lifeng Wang[2]**

[1]*School of Economics, Jilin University, Changchun, 130015 Jilin, China*
[2]*University of the East (Manila) Graduate School, 2219 C.M. Recto Avenue, Brgy. 404, Zone 41, Sampaloc, Manila 1008, Philippines*

Correspondence should be addressed to Lifeng Wang; 2016123649@jou.edu.cn

Received 7 March 2022; Revised 21 March 2022; Accepted 28 March 2022; Published 30 April 2022

Academic Editor: Hasan Ali Khattak



In order to control the risks of Chinese enterprises in infrastructure investment in developing countries, the corresponding evaluation system is constructed through a structural equation model algorithm to analyze these risks, so as to achieve risk prediction and risk controllability. Structural equation modeling is a method to establish, estimate, and test causality. It can replace multiple regression, path analysis, factor analysis, covariance analysis, and other methods and clearly analyze the effect of individual indicators on the population and the interrelationship between individual indicators. It is a multivariate statistical modeling technology mainly applied to confirmatory model analysis. Due to the guidance of national policies, there are more and more opportunities for Chinese enterprises to invest abroad. However, due to the influence of political, economic, and environmental factors, overseas investment is facing many difficulties. This paper analyzes the risks from four aspects: bilateral policy risk, legal difference and litigation risk, international economic risk, and technical risk through structural equation model algorithm. Aiming at these risks, the simulation software of the algorithm is constructed in MATLAB big data analysis software, and the risk control measures are put forward. Finally, with the support of China's policies, in order to ensure the investment income, we should carry out risk intervention for the foreseeable risk and reduce the impact of risk on the investment income as much as possible, so as to improve the risk prevention and management awareness of overseas investment business. By analyzing the characteristics of venture capital and the various kinds of risks affecting venture capital, the risk structure model estimation of risk sneak attack is established by using the principle of structural equation model, and the impact of various risks on investment risks can be analyzed, so that the risk measurement and control of venture capital provides the basis of theoretical knowledge.



## 1. Introduction

From the initial introduction of foreign enterprises to Chinese investment, now with the improvement of Chinese economic strength, China has realized the Chinese enterprises to go out; since the reform and opening up, China has a belt, a path initiative. As a strategy of opening up to the outside world, economic corridor theory, economic belt theory, international cooperation and win-win development theory, and cross-regional cooperation theory are China's main products and world-facing industries.

Although the development of science and technology has reduced the space-time distance between countries and international exchanges have become more and more frequent, the slogan of global village has been put forward. However, due to the different cultural customs and economic differences among countries, there are a lot of risks in international investment.

Feng et al.'s policy guidance has led Chinese enterprises to invest more and more abroad. Moreover, with the improvement of China's economic level, labor and management costs are higher and higher, which has also accelerated the pace of outward investment. In this paper, the exchange rate fluctuation risk in overseas investment is analyzed, and the structural equation model is used to evaluate the foreign exchange risk faced by more than 200 Chinese foreign-invested enterprises, which provides reference experience for the exchange rate risk evaluation of Chinese foreign-invested enterprises [1]. Lanxin's logistics is one of the important links in the management of production-oriented enterprises. No matter the purchase of raw materials and the sales of products are inseparable from the assistance of logistics. This paper explores various risks faced by logistics enterprises from a legal perspective and uses structural equation model to analyze all the influencing factors of legal risks involved in logistics enterprises, so as to transfer risks and achieve the purpose of risk control [2].

Enterprises' investment in foreign investors will face the impact of local laws, humanities, management, logistics, and other uncontrollable risks. Economic instability among international countries is the norm. In this economic environment, national economic interdependence and mutual cooperation is the direction of future development.

Yi's global economic development is inseparable from win-win cooperation among countries. With the progress of science and technology, exchanges between countries are becoming more and more convenient and economic development is more dependent. The article puts forward one's "one belt, one road" proposal to analyze the significance of the development of international business and the problems encountered in the process. All economic and trade development is two-way. When our products are being transported abroad, they will also introduce high-quality products to the country and will impact on domestic products and how to build a common community of cooperation and development. The one belt, one road initiative, is in [3].

There are risks in any investment, especially in overseas investment. There are more uncontrollable risks. Moreover, Chinese enterprises' foreign investment is still in the trial stage, lack of transnational operation practice, and complex political relations, which brings many problems to overseas investment, especially in developing countries, whose economy and talents are relatively backward, and the operation of Chinese enterprises [4]. This paper analyzes the risks encountered by Chinese enterprises in overseas investment, carries out risk control for foreseeable risks, and reduces the impact of risk factors on enterprise operation as much as possible, so as to improve investment safety.

*1.1. Risk AHP Analysis of Enterprises' Investment in Infrastructure in Developing Countries.* Taking Chinese enterprises entering country a to carry out infrastructure investment and construction projects as an example, this paper analyzes the possible risks they may face by analytic hierarchy process (AHP). AHP is to brainstorm and analyze from an access point and summarize the element level to form follow-up factors. In the AHP basic research of transnational investment, the AHP factor decomposition is generally carried out from the four levels of policy, law, economy, and technology. The AHP analysis of this research is carried out from the above four levels, and the relevant factors are analyzed, respectively [5].

Policy risks are mainly decomposed in the direction of bilateral policies to investigate the impact of policy changes or bilateral foreign policy changes in multiple countries on investment risks.

The legal risks mainly focus on the influence of overseas investment design to other countries and regions on the legal risks and risks of multicontracts under the Internet plus mode.

Economic risks mainly focus on the impact of basic economic parameters of different countries (stock price, foreign exchange, freight rate, land price, house price, other prices, average wage, and other economic indicators) on overseas investment and the operation of multinational enterprises.

Technical risks are mainly concentrated in developing countries, and the technical talent reserve has an important impact on the project. The cost of capital and time of human resources are the increased human resource costs in the project, and the recruitment difficulties and performance management difficulties caused by foreign employment are also the risk of human resource vacancies.

Through AHP analysis, it is found that the above four factors basically cover most of the risks, that is, the AHP analysis and PEST analysis in this study can be organically combined [6].

## 2. SEM Factor Analysis Based on AHP

The structural equation modeling (SEM) method has been widely used in the research of structural equation in the later stage of the century, which is not affected by many external factors. When multiple cause and result problems need to be solved, the algorithm advantages of structural equation model are relatively prominent, especially in the fields of social science, economy, market management, and so on. Traditional statistics can not deal with relevant problems well. A structural equation model can deal with multiple dependent variables at the same time and is more inclusive, which can supplement the shortcomings of traditional linear functions, as a method of multivariate data analysis.

*2.1. Analytical Method.* Exponential weighted moving average (EMA) is an analysis method that gives different weights to the value to be analyzed, obtains the moving average value according to different weights, and takes the final moving average value as the basis to achieve the prediction value. And the weighted index moving average method is more accurate in predicting the recent change law, so the closer it is to the current value, the more reliable it is. Its advantage is simple and convenient, and it has more accuracy than the traditional algorithm.

The expression of EMA is as shown in

$$v_t = \beta v_{t-1} + (1-\beta)\theta_t, \tag{1}$$

where $v_t$ is the index of occurrence at time $t$, i.e., the weighted index; $v_{t-1}$ is the index of occurrence at time $T-1$; $\beta$ is the moving window coefficient; and $\theta_t$ is the reference index at time $t$.

An analytic hierarchy process (AHP) decomposes the factors related to decision-making into different levels such as objectives, criteria, and schemes and makes qualitative

Table 1: Comparative analysis of sensitivity during the signing period.

| Grouping | Risk sensitivity during signing (%) Environmental risk | Policy risk | Political risk | Social risk | Credit risks |
|---|---|---|---|---|---|
| Structural equations | 86.37 | 84.74 | 86.52 | 81.27 | 91.62 |
| State space group | 68.74 | 70.21 | 73.94 | 65.09 | 80.34 |
| $t$ value | 0.368 | 0.457 | 0.649 | 0.521 | 0.394 |
| $p$ value | 0.008 | 0.09 | 0.013 | 0.011 | 0.007 |

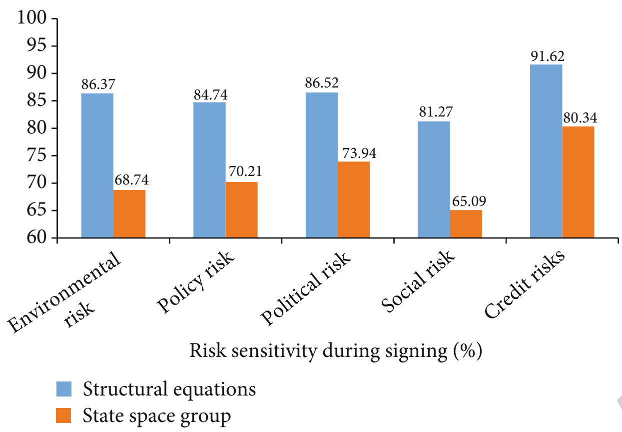


Figure 1: Comparison of contract period sensitivity under different models.

and quantitative analysis on the basis of different levels. This kind of analysis is called the analytic hierarchy process. In reality, we all know that the choice is greater than the result, and often the decision-making problem has become a factor perplexing the development of the enterprise. Before the decision-makers make a judgment on the problems faced by the enterprise, they need to consider many factors and combine their own enterprise situation in order to give a specific decision.

*2.2. Bilateral Policy Risk (P Indicator).* Taking Chinese enterprises' investment in country a as an example, when the foreign and bilateral policies of China and country a change, it is easy to cause changes in investment and later operation conditions and bring good opportunities or bad risks.

According to the bilateral policy risk rating coefficient between China and country a proposed by the international political advisory body, the minmax sorting is carried out to obtain the evaluation value in the $[0, 1]$ interval, in which the higher risk is 1. The minmax sorting algorithm is as follows:

$$y_i = \frac{x_i - \min(x)}{\max(x) - \min(x)}, \quad (2)$$

where$x_i$is the$i$th input item in the input sequence$x$,$y_i$is the output item corresponding to the$i$th input item,$\min(x)$ is the minimum value in the sequence$x$, and$\max(x)$is the maximum value in the sequence $x$.

The original evaluation formula of $P$ index is

$$P_t = \tau_P \bullet \text{minmax}(p_t), \quad (3)$$

where $P_t$ is the $P$ index at time $T$ before EMA, $p_t$ risk rating results proposed for international political advisory bodies, and $\tau_P$ is the conductivity.

*2.3. Legal Differences and Litigation Risk (S Index).* Similarly, taking the investment of Chinese enterprises in country a as an example, the local laws of China and country a have regulatory effect on the project. In addition, international law also has constraints on the project, because the complex litigation logic generated by many legal relations arising from transnational cooperation is more complex than simply carrying out relevant investment and subsequent operation in China. $S$ index involves the complexity of legal relations and legal provisions, and its factor control function is shown in

$$S_t = \tau_S \bullet \text{minmax}(x_t) \bullet \text{minmax}(s_t), \quad (4)$$

where $S_t$ is the $s$ index at time $T$ before EMA; $x_t$ is the number of predictable legal relationships involved in the project, calculated by the number of contracts; $s_t$ is the number of predictable legal provisions involved in the project; and $\tau_S$ is the conductivity;

*2.4. International Economic Risk (e Indicator).* As overseas investment involves foreign exchange rate and the expected assessment that the change of foreign exchange rate will change the income of the enterprise in a certain period in the future, that is, the loss of the enterprise in the process of cash return in the future, China's foreign-invested enterprises will be involved in forward, spot draft, foreign exchange option, currency exchange, and other transactions, and the change of exchange rate will have an economic impact. And overseas countries' own economy, stock market, and real estate market can affect the income of China's overseas investment.

*2.5. Technical Risk (T Index).* Local technical talents in developing countries may have difficulty meeting the needs of project construction and operation, so it may increase the cost of human resources and the difficulty of human resources management due to the mobilization of technical talents from China to country a.

Table 2: Comparative analysis of risk sensitivity during construction period.

| Grouping | Risk sensitivity during construction (%) | | | | |
|---|---|---|---|---|---|
| | Technical risk | Personnel risk | Cost risk | Irresistible risk | Infrastructure risk |
| Structural equations | 93.67 | 89.78 | 91.62 | 84.51 | 94.57 |
| State space group | 80.47 | 75.64 | 84.54 | 71.23 | 81.62 |
| $t$ value | 0.697 | 0.567 | 0.461 | 0.634 | 0.493 |
| $p$ value | 0.014 | 0.008 | 0.006 | 0.011 | 0.007 |

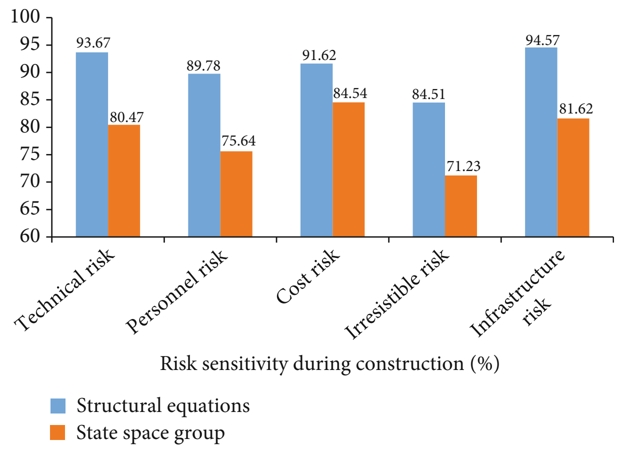


Figure 2: Comparison of sensitivity of risk analysis during construction under different models.

## 3. SEM Model and Algorithm Design of Enterprise Investment in Infrastructure Risk in Developing Countries

We perform full time-domain curve estimation for the above four indexes, respectively, to obtain the curve estimation equation. Weighted superposition of the four curve estimation equations to obtain the SEM model is as shown in

$$F_{\text{SEM}}(t) = A_1 f_P(t) + A_2 f_S(t) + A_3 f_E(t) + A_4 f_T(t), \ \sum_{i=1}^{4} A_i = 1, \quad (5)$$

where $F_{\text{SEM}}(t)$ is the model function based on the independent variable $t$ after the integration of SEM model, $f_P(t)$ is the model function based on independent variable $t$ obtained by linear estimation of $P$ factor, $f_S(t)$ is the model function based on independent variable $t$ obtained by linear estimation of $s$ factor, $f_E(t)$ is the model function based on independent variable t obtained by linear estimation of factor $E$, $f_T(t)$ is the model function based on independent variable $t$ obtained by linear estimation of $T$ factor, and $A_i$ is the weighting coefficient of the $i$th function in the SEM integration system;

## 4. Effectiveness Verification of SEM Model of Enterprise Investment in Infrastructure Risk in Developing Countries

In order to verify the quasidetermination of the structural equation model in this study on the risk analysis of enterprises' investment in infrastructure in developing countries, the sensitivity of risk analysis is simulated by comparing with the state space model, mainly through the verification and analysis of the risk sensitivity in the signing period, construction period, operation period, and other periods. We load the Simulink module under MATLAB, build the simulation model for the above SEM model algorithm, and simulate and verify the sensitivity of risk in each period.

*4.1. Risk Sensitivity Verification during Signing.* Through the statistics of previous research data and other methods to count the risks during the signing period, this study counted the risk modules of five signing periods, including environmental risk, policy risk, political risk, social risk, and credit risk. We verify and compare the sensitivity of the signing period risk module of the SEM model and state space model. The specific data are as follows in Table 1;

It can be seen from the data in Table 1 that the risk sensitivity during the signing period of the structural equation group is more than 80%, and the sensitivity of credit risk is more than 90%, while the risk sensitivity during the signing period of each module of the state space group is about 70%, and the range is within 10%. In order to more clearly observe the gap between the two groups of data, see Figure 1 below;

It can be seen from Figure 1 that the risk sensitivity during the signing period obtained by using the structural equation model is much higher than that obtained by using the state space model, which shows that it is more accurate for predicting the risk during the signing period, which will also be of great significance for enterprises to reduce risks and achieve cooperation more smoothly.

*4.2. Verification of Risk Sensitivity during Construction.* The construction period of enterprise investment is also a crucial link. If the risk is not properly handled and controlled during this period, it will cause losses on the early investment and even damage the cooperation. Therefore, the analysis of the risk during the construction period is an indispensable part. First, through the statistical analysis of the types of risk during the construction period, we verify and analyze various risk types during the construction period, and the specific data are shown in Table 2 below.

Table 3: Comparative analysis of risk sensitivity during operation period.

| Grouping | Risk sensitivity during operation (%) | | | | |
|---|---|---|---|---|---|
| | Economic risks | Manage risk | Production risk | Strategic risk | Financial risk |
| Structural equations | 86.37 | 90.34 | 95.64 | 93.36 | 96.58 |
| State space group | 69.98 | 82.35 | 80.13 | 79.84 | 77.78 |
| $t$ value | 1.367 | 1.467 | 1.248 | 1.367 | 1.648 |
| $p$ value | 0.023 | 0.021 | 0.017 | 0.027 | 0.031 |

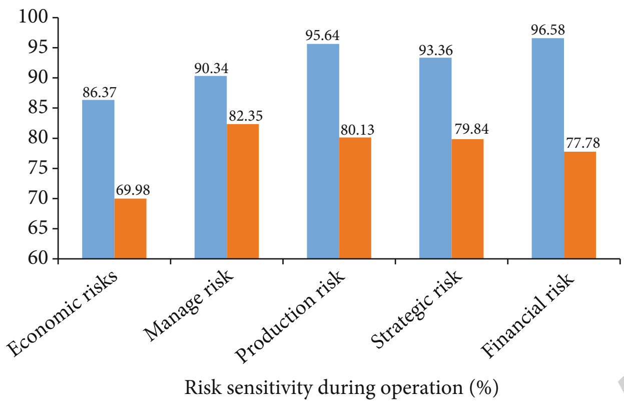


Figure 3: Comparison of risk sensitivity during operation under different models.

It can be seen from the data in Table 2 that the comparative difference between the two groups of data has obvious statistical significance ($p < 0.05$), and the average sensitivity of risk analysis during construction using structural equation model is 90.83%, while the average sensitivity of risk analysis during construction using state space model is 78.7%. In order to see the difference between the two groups of model data more clearly, see Figure 2 below.

As can be seen from Figure 2, the sensitivity of the risk analysis during the construction period obtained by using the structural equation model algorithm is much higher than that obtained by using the spatial state model, which also shows that the model constructed in this study has high accuracy of risk analysis and greatly improves the ability of enterprises to avoid risks during the construction period.

*4.3. Verification of Risk Sensitivity during Operation.* Enterprises should also analyze and predict risks during operation, so that they can make response strategies in advance, so that enterprises can develop in the long term, obtain greater benefits, and avoid unnecessary losses. The data in Table 3 below is the sensitivity of risk analysis encountered during various operations.

From the data in Table 3, it can be seen that most of the risk sensitivities during the operation period using the structural equation model algorithm are more than 90%, and only the sensitivity of economic risk is only 86.37%. The risk sensitivity of the operation period using the state space model is less than 85%, and the sensitivity of economic risk under the model is only 69.98%. In order to more clearly see the differences between the two groups of models, see Figure 3 below.

It can be seen from Figure 3 that the accuracy of risk analysis during operation under the structural equation model algorithm is much higher than that under the state space model algorithm, which shows that the model in this study has high sensitivity to risk prediction and can improve the return of enterprises' investment in developing countries.

*4.4. Sensitivity Verification under Other Risk Classification Conditions.* In addition to the effectiveness verification of the risks in the signing period, construction period, and operation period, there are other risks to be analyzed, including human resources risk, legal litigation risk, market risk, government relationship, and foreign-related relationship risk. The specific risk sensitivity data are shown in Table 4 below.

From the data in Table 4, it can be seen that the comparative difference of sensitivity data under the two groups of models has obvious statistical significance ($P < 0.05$). The sensitivity data under all risk classification conditions using the structural equation model algorithm are lower than those using the state space model algorithm. In order to facilitate readers to more clearly compare the differences between the two groups, Figure 4 is made.

From Figure 4, we can see that no matter what risks, the sensitivity of the algorithm is more sensitive than that of the control group. This shows that the advanced algorithm of this research model provides more information and evidence for the improvement of the risk aversion ability of China's infrastructure investment in developing countries.

## 5. Risk Control Strategy of Enterprise Investment in Infrastructure in Developing Countries Based on SEM Analysis

From the above analysis, we can see that the problems encountered by China's overseas investment generally belong to the category of predictable risk. Using the above SEM method, we can realize the risk prediction and analysis of Chinese enterprises' infrastructure investment in developing countries.

At present, the algorithm model has not yet formed package software. The simulation software of the algorithm can be built in MATLAB big data analysis software to predict and analyze the relevant data, involving the AHP factors of pest in China, the invested country (country a), the

Table 4: Comparative analysis of sensitivity under other risk classification conditions.

| Grouping | Other risk sensitivity (%) | | | | |
|---|---|---|---|---|---|
| | Human resource risk | Legal litigation risk | Market risk | Government relationship risk | Risk of foreign relations |
| Structural equations | 87.68 | 94.74 | 90.67 | 87.61 | 92.63 |
| State space group | 71.60 | 79.31 | 82.23 | 66.61 | 79.84 |
| $t$ value | 1.038 | 0.874 | 1.234 | 0.761 | 0.691 |
| $p$ value | 0.016 | 0.011 | 0.019 | 0.009 | 0.006 |

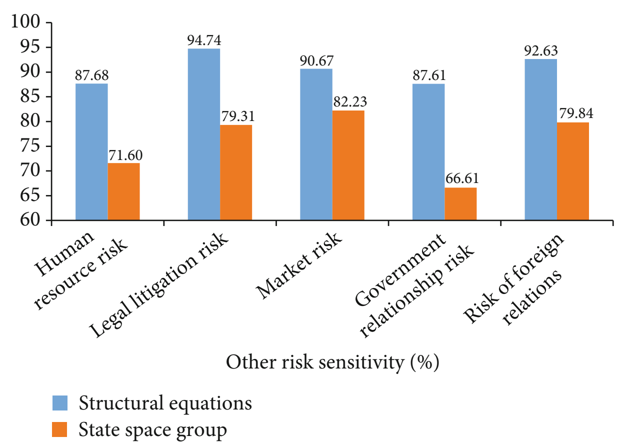


Figure 4: Comparison table of risk analysis sensitivity under different model algorithms.

countries along the logistics, and financial channels and analyze the predicted value of PEST related risks. Then, we find the risk point according to the results of the relevant factors of the predicted value and the overall results of SEM [7]. After finding the risk points, we use logical analysis method, news analysis method, data logical analysis method, etc. to find the risk logic. If the risk incentives can be identified, we prepare the plan according to the risk incentives.

If the risk incentives are not clear, the feasibility of the project investment should be reexamined. If there is a separate risk in the investment stage such as signing period, construction period, and operation period, the risk can be transferred by Internet plus operation mode. If the uncertain risk can be transformed into fixed risk by means of insurance and internal insurance, and the fixed risk can meet the needs of cost control, the risk transformation can also be completed by means of insurance and internal insurance.

## 6. Summary

Political support makes Chinese enterprises more and more bold in trying overseas investment. The enterprise scale, product quality and service, production structure, and sustainable development of enterprises have a significant positive impact on the high-quality development of manufacturing enterprises [8]. Scientific and technological innovation plays a direct and indirect role in promoting the upgrading of industrial structure. Labor force innovation input, capital innovation input, urban innovation input, and environmental innovation investment are the main influencing factors of industrial structure upgrading, and the weight of each influencing factor is determined [9]. In addition, global integration catalyzes economic development and requires a new supply and demand model. There are complex and unpredictable risks in the international market. This paper analyzes the risks in four aspects: bilateral policy risks, legal differences and litigation risks, international economic risks, and technical risks. Through the analysis, it is found that the problems encountered by China's overseas investment generally belong to the category of predictable risks. Using the above SEM method, it can realize the risk prediction and analysis of Chinese enterprises' infrastructure investment in developing countries, so as to achieve risk controllability and carry out risk intervention for predictable risks, so as to reduce the impact of risks on investment income as much as possible, and so as to improve the income of overseas investment business and property and personal safety. Based on the fact that overseas investment is greatly affected by political factors, international economy, and environment, and the instability of the external environment restricts overseas investment, we look forward to the further development of the global village. There is a unified treaty to restrict both parties, so as to provide a good congenital condition for overseas investment.

## Data Availability

The data underlying the results presented in the study are available within the manuscript.

## Conflicts of Interest

There is no potential conflict of interest in our paper.

## Authors' Contributions

All authors have seen the manuscript and approved to submit to your journal.

## References

[1] Z. Feng, L. Wenjie, and Z. Jianjun, "Analysis on risk hedging performance evaluation methods of Chinese overseas investment enterprises – Based on structural equation model analysis of 274 Chinese overseas enterprises," *Economic Research Reference*, vol. 14, pp. 23–34, 2018.

[2] Z. Lanxin, "Empirical study on influencing factors of legal risk of logistics enterprises based on structural equation model," *Logistics Technology*, vol. 33, no. 3, pp. 204–206, 2014.

[3] Z. Yi, "One belt, one road, the development opportunities and challenges of international business," *Modern Business*, vol. 36, pp. 46–48, 2021.

[4] C. Qinghua, G. Xiaohui, G. Wensha, and L. Xiaomeng, "One belt, one road, China's local policy: a textual quantitative study," *Technology Think Tank*, vol. 12, pp. 41–51, 2021.

[5] L. Jun, "Bao Tingting Research on one belt, one road logistics efficiency evaluation based on DEA-Malmquist method," *Journal of Guilin Institute of Aerospace Technology*, vol. 26, no. 4, pp. 454–463, 2021.

[6] L. Xiaobai, "One belt, one road, China's foreign direct investment impact mechanism research – based on host country's vision," *Jiangxi Social Sciences*, vol. 41, no. 11, pp. 57–67, 2021.

[7] W. Di, "Research on foreign investment one after the "one belt, one road" initiative – based on PEST analysis," *Journal of Guiyang University (Natural Science Edition)*, vol. 16, no. 3, pp. 39–44, 2021.

[8] Y. Kui, "Study on the influencing factors of high-quality development in manufacturing enterprises based on structural equation model," *Hebei Enterprise*, vol. 3, pp. 43–47, 2022.

[9] C. Pengyu and C. Tang, "Research on the impact of scientific and technological innovation on industrial structure upgrading —— empirical analysis based on structural equation model," *Technology and Economy*, vol. 34, no. 6, pp. 21–25, 2021.