

Impact of Foreign Investment Risk Factors on Attracting Foreign Investment in Upstream Industries (Case Study: Oil Industry)

M.R. Shahriari^{*1}, M. Eshaghinia², K. Fathi Hafashjani³

Abstract

The main objective of this study is to identify and rank foreign investment risk factors and determine their impact on attracting foreign investment in the upstream oil industries. In terms of nature and method, it is descriptive and, in terms of relationships, it is inferential and correlational. The statistical population of the research includes managers and experts in the upstream oil industries, and the sample size was estimated to be 103 people using random sampling. The collected data was analyzed using SPSS, Expert Choice, and Smart PLS software. The results showed that according to the experts in the statistical population, economic risk is the most important factor in foreign investment. Also, in the structural equation modeling method, the correlation between foreign investment risk and attraction factors was significant, with political risk having the greatest impact on foreign investment risk, followed by economic and financial risks and 87.4% of the changes in foreign investment attraction factors could be predicted by foreign investment risk, and the overall fit of the proposed model showed a GOF value of 0.447, indicating a high fit of the research model.

Keywords: Foreign Investment, Investment Risk, Decision Making, Partial Least Squares, Attraction

Manuscript was received on 07/25/2024, revised on 09/02/2024 and accepted for publication on 09/10/2024.

1. Introduction

Capital accumulation, as one of the essential prerequisites for economic growth, can be sourced domestically or internationally. Today, the flow of foreign investments is a significant indicator of the globalization process of the economy. Beyond its importance in the dynamics of the global economic system, many developing countries suffering from a lack of domestic financial resources see the attraction and utilization of these foreign resources as essential for the continuation of their economic development programs. Kiani.[12]. The attainment of long-run economic growth remains a fundamental objective of every economy, and a critical vehicle of growth that many countries rely on to achieve this objective is foreign direct investment. Adewal. [17]. Attracting FDI in any country depends not only on liberalizing foreign capital and creating profitability conditions for foreign firms by the host country but also on reducing risk and uncertainty. Kiani. [12]. When a host country faces political, economic, and financial instability, it will not be a safe and suitable place for investment, even if the return on investment is favorable. Jinjarak. [27]. Uncertainty in developing countries arises not only from the behavior of market agents (e.g., consumers and suppliers) but also from the behavior of political and social leaders (especially

* Correspondence Author

¹ Department of Industrial Management, University of Tehran Soth Branch, Tehran, Iran, Email: Shahriari.mr@gmail.com

² Department of Industrial Management, University of Science and Research, Tehran, Iran, Email: eshaghi.1970@yahoo.com

³ Department of Industrial Management, University of Tehran Soth Branch, Tehran, Iran, Email: fathikiamars@yahoo.com

through the government of the host country). White. [40]. However, the determinants of FDI attraction vary from country to country and economy to economy and are not of equal importance, depending on the economic and political conditions of the countries. According to historical, sociological, and political-economic studies of Iran and the developments in the Middle East, it appears that property rights structure and political, economic, commercial, and social risks are particularly important for attracting foreign investments. Mohammadzadeh et al. [14].

Most countries, especially developing ones, make significant efforts to attract FDI to their economies to create sustainable economic growth from more stable sources. Jalali et al. [3]. Root (1987) opined that any foreign investment project must be assessed from the perspectives of its economic, social, political and cultural environments. Adewal. [17]. According to the theory of irreversible investment, future political and economic uncertainty will reduce the investment of risk-neutral firms. Yu and Wang. [43]. Upstream oil activities are exposed to economic and financial risks on account of significant capital investments, technical risks associated with availability of technology and workforce skills, the amount of proven oil reserves, climate policies for low-carbon economic development, and political risks. Duan et al. [23]. Iran's economy is highly dependent on oil, making it crucial to examine the price changes and uncertainty and risk trends that arise, particularly in terms of attracting domestic and foreign investments. Kiani. [12]).

This research aims to identify the most critical foreign investment risk factors and determine the impact of these risk factors on attracting foreign investment in Iran's upstream oil industries. Following the initial introduction, the theoretical foundations of investment, risk, and factors influencing investment attraction are explained. The impact of risk factors on attracting foreign investment is examined using the partial least squares method, and the results are presented and discussed.

2. Theoretical Foundations

2.1 Foreign Investment

According to Douglas North's theory (1990), the only way for developing countries to escape widespread poverty is to inject large amounts of capital into various industries. Mohammadzadeh et al. [14]. It is evident that domestic capital financing can be achieved through various means, such as using domestic savings, foreign debt, and attracting foreign investment. Kazemi. [10]. One of the methods of capital financing is foreign direct investment (FDI), which is generally regarded as a mechanism for transferring technology between countries, leading to the activation of growth engines for employment, technology, and productivity. Jahangard and Shir mard [4]. The attraction of FDI in an economy was identified as an important way of bridging the savings–investment gap, which characterizes most developing countries. Sabir and Khan. [31].

2.2 Foreign Investment Risk

Measurable potential loss in an investment is called risk (Ansari Samani et al. [2]. According to the traditional international investment theory, the uncertainty of the host country's economic environment is one of the main sources of potential economic costs. Yu and Wang. [43]. The risk of a host country is inversely proportional to its FDI inflow. Zhang et al. [44]. The risks for international companies are based on a high degree of uncertainty and complexity influenced by commodity prices, geopolitical factors, and political and economic instability. Blonigen. [21].

2.3 Political Risk

Political risk refers to the risk that a foreign government action will negatively affect the cash flows of a company conducting an international investment. Bekaert et al. [20]. Political risk means the possibility that political forces in a given society might negatively impact the profitability and efforts of multinational companies to achieve their other goals (Gugharchian et al. [13]). The most important political risk factors include restrictions on the entry of foreign investors, mechanisms to control FDI flows, restrictions on foreign exchange transactions, government intervention, social instability, political violence, and government incapability (Mohammadzadeh et al. [14]).

2.4 Financial Risk

Financial risk involves the acceptance of risk in financial matters. This type of risk arises from the use of debt, where higher debt increases financial risk. Financial risk indicators include five variables: foreign debt, exchange rate stability, debt services, current account (as a percentage of production), and international liquidity, with this index's weight ranging from zero to twenty-five. Gugerdchian et al. [13]. White and Fan (2006) defined financial risk as the increase in a country's tendency to default on its financial obligation to a foreign body. Therefore, it is measured by variables such as external debt stock, exchange rate stability, current account deficit and foreign exchange earnings. Adewal. [17].

2.5 Economic Risk

Economic risk refers to the danger of changes in a country's economic structure or constant fluctuations in its currency exchange rates and economic laws that reduce the return on foreign investments. In other words, economic risk is the danger of losses for foreign investors due to exchange rate fluctuations or changes in a country's laws, which disrupt foreign investors' planning (Ansari Samani et al. [2]). The main variables related to the domestic economy are gross domestic product (GDP), gross domestic investment, and main variables related to the trade balance, including goods and services exports, goods and services imports, and exchange rates (Ra'ei and Fazelian [5]). Other variables such as inflation, current account balance and budget deficit are also important indicators of economic risk. Wojciechowski and Kraysztof [41]. Table 1 shows the foreign investment risk factors.

Table 1. The most important risk factors of FDI

Row	Risk	Factor	Source
1	Politic	expropriation	Duan et al. [23]; Nieman et al. [30]; Yang;[42]
2		corruption	Kianpur and Piri. [11]; Yang. [42]; Bailey. [19]; Kaufmann et al. [28]
3		Discriminatory tax	Yang. [42]; Bailey. [19]; Ansari Samani et al. [2]
4		Internal conflicts	Liu et al. [29]; Mohammadzadeh et al. [14]; Rae and Fazelian. [5]
5	Economic	Open commercial space	Kianpur and Piri. [11]; Fetros and Emami. [8]; Shahabadi and Mahmudi. [7]; Janicki and Wunnava. [26]; Yu and Wang. [43];
6		Invest return rate	Kianpur and Piri. [11]; Mohammadzadeh et al. [14]; Rae and Fazelian. [5]
7		Swelling	Moshiri and Kianpur. [15]; Najjarzadeh et al. [16]; Adewal. [17]
8		Gross domestic product	Ansari Samani et al. [2]; Rae and Fazelian. [5]; Raufi and Ghalamzanniko. [6]
9	Financial	Exchange rate	Adewal. [17]; Shahabadi and Mahmudi. [7]
10		Deficit	Adewal. [17]; Najjarzadeh et al. [16]; Kianpur and Piri. [11]
11		Government default	Yang. [42]; Najjarzadeh et al. [16]; Kianpur and Piri. [11]

Source: researcher's findings

2.6 Factors Attracting Foreign Investment

Today, attracting foreign direct investment (FDI) is considered one of the most important factors in economic development in most countries worldwide. Taking initiative in this area can significantly achieve countries' economic goals. However, in recipient countries of foreign capital, certain factors can impact attracting foreign direct investment (Kazemi et al. [9]). The most effective factors in attracting foreign investment are listed in Table 2.

3. Research Background

Numerous studies have been conducted on foreign investment risk in various fields using different methods. For example, Morrissey (2012) examined the relationship between governance, foreign direct investment (FDI), and private investment in his article, concluding that governance indicators, including political stability, absence of violence, regulatory quality, rule of law, and control of corruption, have a direct impact on attracting FDI and private investment. Kazemi et al. [9]. Additionally, Sissani and

Table 2. The most effective factors for attracting FDI

Row	attraction factors	Source
1	Political stability	Bailey. [19]; Kaufman et al. [28]; Sabir and Khan. [31]; Kazemi et al. [9]
2	Rule of law	Tesoneva. [39]; Bailey. [19]; Kaufman et al. [28]; Sabir and Khan. [31]
3	Corruption control	Bailey. [19]; Kaufman et al. [28]; Sabir and Khan. [31]
4	Tax incentive	Bailey. [19]; Sethi et al. [33]; Kazemi et al. [9]
5	Supervisory quality	Bailey. [19]; Kaufman et al. [28]; Sabir and Khan. [31]
6	democracy	Bailey. [19]; Sabir and Khan. [31]; Harms and Ursprung. [24]; Kaufman et al. [28]

Source: researcher's findings

Belkacem (2014) investigated the effect of political and financial risks on FDI in Algeria from 1990–2012; they concluded that political and financial risks are critical to FDI inflows, with financial risk being a strong determinant. Sissani and Belkacem. [34]. Wisniewski and Pathan (2014) explored the role of political factors in multinational corporations' investment decisions, using data from 33 OECD member countries between 1975 and 2009. Their findings indicated that foreign investors are less inclined to invest in countries where government spending is more directed towards military expenditures. Mohammadzadeh et al. [14].

In another study, Bayraktar (2015) indicated that developing countries with better business environments attract more FDI, which in turn facilitates the retention of foreign investors and simplifies economic exchanges to attract FDI. Kianpour and Piri. [11]. This result was corroborated by a recent study of a MENA country, namely, Egypt, for the period 2005–2015 by Salem and Younis (2021). They found both economic and political risks as determinants of FDI in the country. Salem and Younis. [32]. Similarly, an investigation of the impact of political and financial risks on FDI inflows into 90 countries from 1985 to 2007 was conducted by Hayakawa et al. (2013) using the generalized method of moments (GMM) estimator. Their results, which concentrated mainly on developing countries, indicated that of all the estimated components of political risk, the following are closely associated with FDI flows: religious tension, democratic accountability, corruption, ethnic tension, socioeconomic condition, investment profile and government stability. Regarding financial risk components, only exchange rate stability was found to impact the FDI positively. Adewal. [17]. Research by Taylor et al. (2013) examined the factors that attract FDI into oil-producing economies from 1996 to 2010. The authors' utilized panel OLS to estimate the determinants of FDI for an unbalanced panel of 47 developing countries, which comprised 18 oil producers and 29 non-oil producing developing countries. The findings of the paper indicate that market size, trade openness and business facilitation were found to be significant factors attracting FDI to the oil producing countries. Sookram et al. [35].

In a qualitative–quantitative comprehensive risk evaluation method to analyze FDI in oil refining projects for Chinese oil and gas companies, Liu et al. (2017) identified the following risk factors: investment environment risk; organization management risk; technical risk; health, safety, environmental and social responsibility risk; and economic risk. Tafur et al. [37]. In the same vein, the effect of political risk in Lebanon was investigated for 2008–2018 by Bitar et al. (2020), who reclassified ICRG political risk variables into three components: cohesion, institutional quality and governance. Their results revealed that

all three components are significantly associated with FDI inflows into Lebanon. They, therefore, concluded that political stability is a critical determinant of FDI. Adewal. [17].

Additionally, domestic research findings by Mohammadzadeh et al. (2018) using a vector autoregression approach for panel data from 1990-2015 showed that internal conflicts serve as a proxy for a country's political risk index, significantly impacting FDI attraction in selected developing countries. Mohammadzadeh et al. [14]. Kianpour and Piri (2019) found a positive and significant relationship between variables such as investment return rate, economic growth, human capital, liquidity, and economic openness with foreign investment. Kianpour and Piri. [11]. The impact of national risk on FDI in Iran was studied by Rafat and Farahani (2019) for the years 1985 to 2016 using the two-stage least squares method, showing that national risk indicators affect FDI in the economy. Similarly, Using the two-stage least-squares method, the effect of national risk on FDI in Iran was investigated by Rafat and Farahani (2019) for 1985–2016. Their results suggested that indicators of national risk, including religious and ethnic tension, external conflicts, socioeconomic status and military tension, are significant factors that impact the FDI in the economy. Similarly, the impact of economic, political and financial risks was investigated for 10 MENA countries between 2000 and 2017 by Salehnia et al. (2019). The empirical results from their estimation showed that all three types of risk negatively affect the FDI, with the economic risk being the most influential of the three. Adewal. [17].

Additionally, Mahmoodi and Mahmoodi (2016) examined the causal relationship between FDI, exports and economic growth for eight European developing countries from 1992 to 2013 and eight Asian developing countries from 1986 to 2013 for FDI, exports and GDP using a Panel Vector Error Correction model. The results indicate that there is bidirectional causality between GDP and FDI, and unidirectional causality from GDP and FDI to exports in the short run for European countries. There was also bidirectional causality between exports and economic growth in the short run for Asian countries. Longrun causality exists from export and FDI to economic growth and also from economic growth and export to FDI for both of the European and Asian countries. Sookram et al. [35].

4. Research Methodology

The present study first identifies and examines the most important risk factors in FDI, then ranks these factors using a multi-criteria decision-making method. Subsequently, the effects of these risk factors on FDI attraction are analyzed using partial least squares regression to determine the relationships between the independent and dependent variables of the study. Multiple-choice questionnaires were used to select and rank the influential risk factors on FDI and to determine the impact relationships among the study variables.

4.1 Research Questions

The research question is: How are the factors influencing foreign investment risk ranked?

4.2 Research Hypothesis

Foreign investment risk affects factors attracting foreign investment.

4.3 Research Method

This study is applied in terms of its objective and descriptive-survey in terms of data collection methods. It is a cross-sectional study in terms of time. From a nature and method perspective, it is descriptive-correlational. The data and analysis methods are quantitative, using inferential statistical tools. The statistical population consists of managers, experts, and specialists working in the oil industry, selected by simple random sampling. The population size is 140, and the sample size, based on the Cochran formula, is 103. Data analysis was conducted using SPSS16 software. For variable measurement, multi-criteria decision-making and partial least squares methods were used. The content and face validity of the questionnaires were employed to measure validity, and the inconsistency index for the multi-criteria decision-making method and Cronbach's alpha coefficient for the partial least squares method were used

for reliability. The inconsistency index of the first questionnaire was 0.089, and the Cronbach's alpha of the second questionnaire was 0.898.

4.4 Proposed Model

Based on the theoretical foundations of the study and factors influencing foreign investment, a hierarchical model of foreign investment risk factors was considered for evaluation and ranking of the most influential factors in creating foreign investment risk in the studied area. The proposed model in Figure 1 is used to determine the impact of foreign investment risk on FDI attraction. On one hand, the impact of existing risk factors in economic, political, and financial areas on foreign investment risk will be analyzed. On the other hand, considering the factors influencing FDI attraction, the impact of foreign investment risk on FDI attraction will be tested.

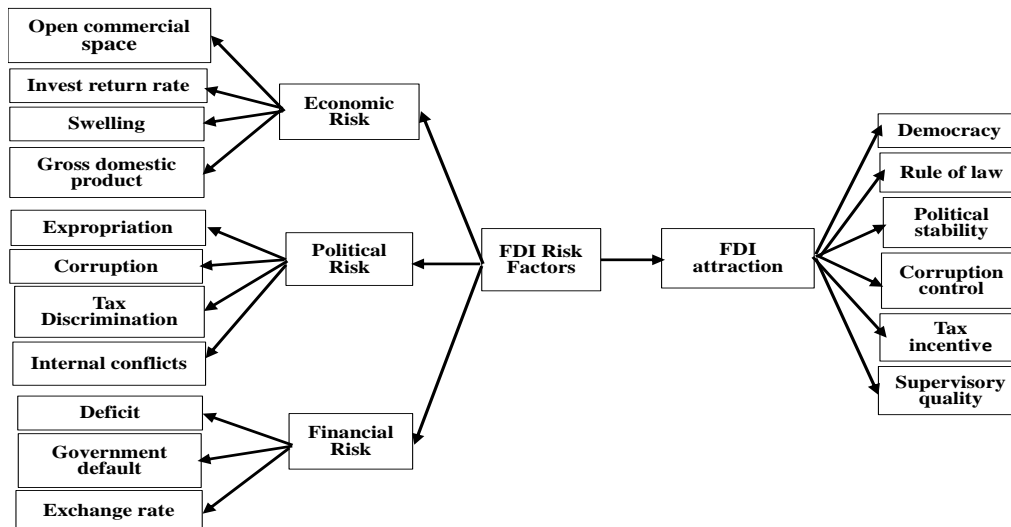


Figure 1. Partial Least Squares Model. Alkhaldi and Alhammouri. [18]

5. Research Findings

Using appropriate statistical techniques related to the research method, type of variables, and other factors, the researcher categorized and analyzed the collected data. Women comprised 21.3% of the statistical population, and men comprised 78.7%.

5.1 Risk Factor Ranking

In the first part, using a multi-criteria decision-making method, the foreign investment risk factors were ranked from the perspective of the research community experts, as shown in Table 3. The foreign investment risk factors were ranked using the TOPSIS method, as shown in Table 4.

5.2 Evaluation of the Measurement Model

In the measurement model, the relationships between observed and latent variables are considered and measured. For evaluating the measurement model's fit, the minimum acceptable criteria for factor loadings (0.4), Cronbach's alpha (0.7), composite reliability (0.7), average variance extracted (0.5), and Fornell-Larcker criterion (where the square root of AVE should be greater than the highest correlation with other constructs) were used. Azar et al. [1].

5.3 Pearson Correlation Test

Correlation coefficients are used to calculate the degree and direction of linear relationships between two variables. The correlation coefficient ranges from -1 to +1. A value closer to +1 indicates a strong

positive relationship, meaning that as one variable increases, the other also increases, and vice versa. Similarly, a value closer to -1 indicates a strong negative relationship, meaning that as one variable increases, the other decreases, and vice versa. The results are shown in Table 5.

Table 5 shows that the significance level of the Pearson correlation coefficient test between pairs of variables is less than the error level of 0.05. Therefore, it can be concluded that there is a significant correlation between all variables.

5.4 Evaluation of the Research Model with Structural Equation Modeling

Structural equation modeling is a general and powerful multivariate analysis technique from the family of multiple regression methods, more precisely an extension of the "general linear model," which allows the researcher to test a set of regression equations simultaneously. Among all multivariate analysis method,

Table 3. Weights of the criteria and sub-criteria of the hierarchical model

Row	Criteria	Weight	Sub-Criteria	Weight	Eigen vector	In compatibility
1	Economic Risk	0.633	Open commercial space	0.205	4.139	0.051
			Invest return rate	0.144		
			Swelling	0.586		
			Gross domestic product	0.063		
2	Political Risk	0.292	expropriation	0.355	4.251	0.092
			corruption	0.389		
			Discriminatory tax	0.161		
			Internal conflicts	0.092		
3	Financial Risk	0.075	Deficit	0.523	3.261	0.096
			Government default	0.272		
			Exchange rate	0.141		

Source: researcher’s findings

Table 4. Ranking of FDI risk factors

Row	Criteria	Index close to ideal	Rank
1	Economic Risk	0.524	1
2	Financial Risk	0.489	2
3	Political Risk	0.427	3

Source: researcher’s findings

Table 5. Pearson correlation coefficients between research variables

Research Variables		FDI risk	FDI attracting factors
Economic risk	Correlation	0.899	0.722
	Significance level	0.000	0.000
Political risk	Correlation	0.765	0.890
	Significance level	0.000	0.000
Financial risk	Correlation	0.692	0.787
	Significance level	0.000	0.000
FDI risk	Correlation	1.000	0.896
	Significance level	0.000	0.000

Source: researcher’s findings

only structural equation modeling uses both multiple regression and factor analysis simultaneously. In general, structural equation modeling reveals the internal structure of relationships between variables through a set of equations similar to multiple regression. To answer the research hypothesis, structural equation modeling was used with the PLS software.

Figure 2 shows the research model with standardized factor loadings and path coefficients (evaluation of measurement models), and Figure 3 shows the research model with t-values (evaluation of measurement models). As observed, the factor loadings for all observed variables exceed the standard value of 0.4. Additionally, the t-statistic values indicate whether the respective variable significantly affects its corresponding construct. As observed, all t-values exceed 1.96, indicating significant impacts on their respective constructs.

On the other hand, the composite reliability and Cronbach's alpha coefficient of all constructs also indicate that the internal consistency of the measurement model is at a desirable level. The goodness-of-fit indices of the latent variables in the measurement model are shown in Table 6.

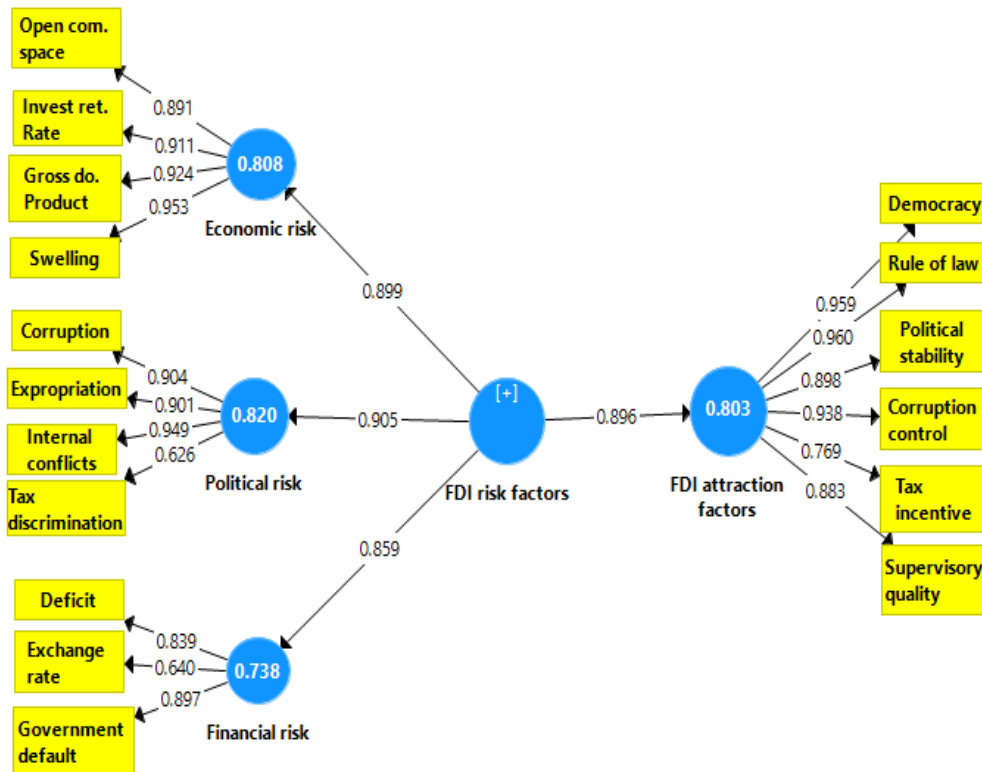


Figure 2. Research model with standardized coefficients of factor loadings and path coefficients (Evaluation of measurement models). Source: researcher's findings

Table 6. Indicators related to measurement models

Variables	Cronbach's alpha coefficients > 0.7	Composite reliability coefficient > 0.7	Average variance extracted > 0.5
Economic risk	0.939	0.957	0.847
Political risk	0.872	0.914	0.730
Financial risk	0.714	0.839	0.639

Source: researcher's findings

As evident from the values of the indices in Table 6, the Cronbach's alpha coefficients for all variables are greater than 0.7, and the composite reliability coefficients for the variables in the table are also greater than 0.7. Thus, it can be concluded that the reliability of the observed variables in the study is confirmed.

Considering the average variance extracted (AVE) for the variables in the table, it can be inferred that the AVE for all variables is greater than 0.5, thereby confirming the convergent validity of the latent variables with their constructs. The goodness-of-fit indices for the main research variables in the measurement model are presented in Table 7.

Based on the figures in the table for the measurement model indices, the reliability and convergent validity of the main research variables with their constructs can be confirmed. The t-statistics and factor loadings related to Figures 2 and 3 and Tables 6 and 7 show that the t-statistics and standardized factor

Table 7. The fit indices of the measurement model for the main variables

Variables	Cronbach's alpha coefficients>0.7	Composite reliability coefficient>0.7	Average variance extracted>0.5
FDI risk	0.927	0.939	0.593
FDI attracting	0.954	0.964	0.816

Source: researcher's findings

loadings between the items and the existing variables are all greater than 1.96 and 0.4, respectively. Thus, the results indicate that, based on the collected data, the questions have been correctly included in the model and research, and there is no need to delete or modify any questions in the questionnaire. Moreover, the composite reliability coefficient, Cronbach's alpha coefficient, and AVE of the constructs are at a very desirable level.

5.5 Fornell-Larcker Test

The Fornell-Larcker test for assessing the discriminant validity of constructs and indices is shown in Table 8. The square root of the AVE for each construct (main diagonal values) should be greater than the highest correlation of the construct with other constructs in the model. The research findings indicate that the square root of the AVE of the latent variables is greater than the correlation between them in the lower off-diagonal cells. Thus, it can be said that the latent variables have more interaction with their questions than with other constructs. In other words, the discriminant validity of the model variables is at an acceptable level.

5.6 Structural Model and Overall Analysis

The structural model, which examines the relationships between independent (exogenous) and dependent (endogenous) latent variables, only considers the latent variables along with the relationships among them. The criteria for testing the structural model are included in Table 9.

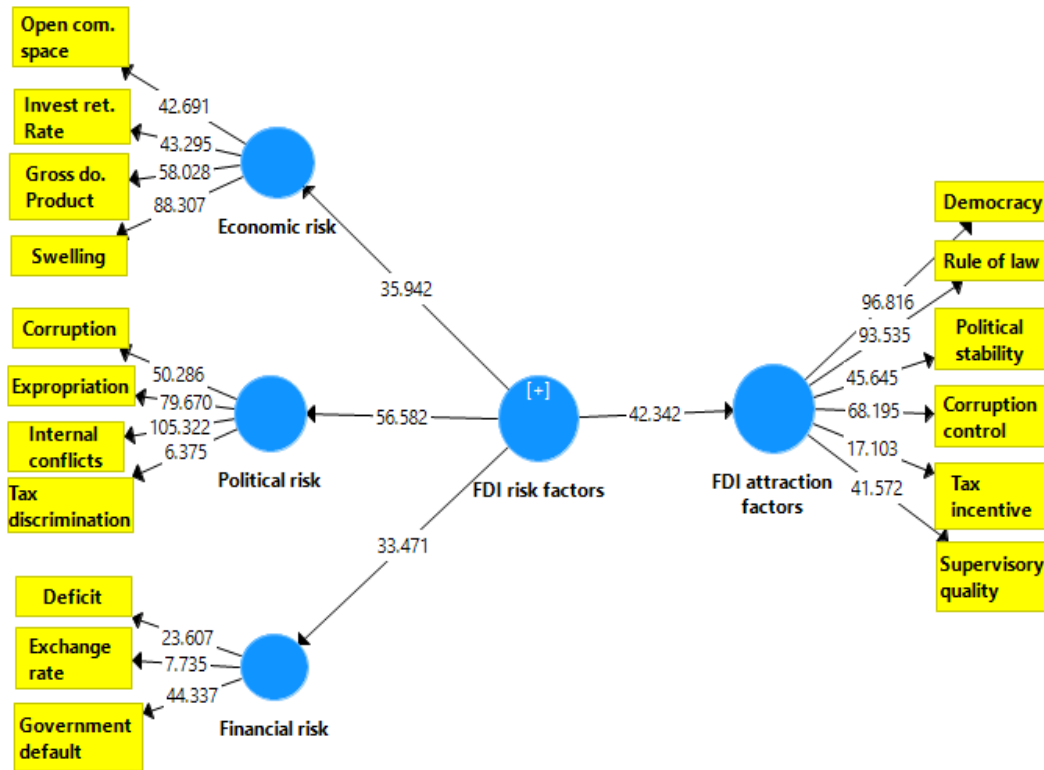


Figure 3. Research model with t-values coefficients. Source: researcher’s findings

Table 8. Divergent validity results by Fornell and Larcker method

Variables	Economic risk	FDI attracting factors	FDI risk	Financial risk	Political risk
Economic risk	0.920				
FDI attracting factors	0.722	0.904			
FDI risk	0.899	0.894	0.770		
Financial risk	0.661	0.787	0.692	0.799	
Political risk	0.675	0.890	0.765	0.732	0.855

Source: researcher’s findings

Table 9. Specifications of criteria used in research analysis

Row	Criterion	Nature and function	the amount
1	t-value & β coefficient	You have a strong impact and meaning. Azar et al. [1]	at least 1.96
2	The coefficient of determination R^2	The effect of the exogenous variable on the endogenous variable. Henseler et al. [25]	0.19-0.33-0.67
3	Predictive correlation index Q^2	Predictive power of the model in dependent variables. Stone and Geisser. [36]	0.02-0.15-0.35
4	Effect size criterion f^2	The intensity of the relationship between the latent variables of the model. Azar et al. [1]	0.02-0.15-0.35
5	Overall model fit GOF	The overall goodness of fit of the model. Tenenhaus et al. [38]	0.01-0.25-0.36

Source: researcher’s findings

Table 10 shows the values obtained from the analysis of the indices and criteria of the model. As shown in Table 10, the calculated t-values between all independent and dependent variables in the model are greater than 1.96 and are significant at the 5% level. Additionally, based on Figure 3, it can be concluded that the t-value between the subcomponents of foreign investment risk, foreign investment attraction factors, and their respective variables is also greater than 1.96, confirming the relationships between the variables and their sub variables. The R2 value for the endogenous variables of the model is at an appropriate level. The R2 value for the foreign investment attraction factors indicates that the foreign investment risk variables together account for 80.3% of the variance in the foreign investment attraction factors, with the remaining variance being dependent on other variables and factors not included in the model.

Table 10. Results of indices and criteria of structural and general models

Direction: independent variable → dependent variable	t-value	Significance level	Q ² dependent variable	R ² dependent variable	f ²
Economic risk → FDI risk	35.942	0.000	0.672	0.808	4.199
Political risk → FDI risk	56.582	0.000	0.574	0.820	4.551
Financial risk → FDI risk	33.471	0.000	0.454	0.738	2.821
FDI risk → FDI attraction factors	42.342	0.000	0.649	0.803	4.088
GOF = $\sqrt{\text{communalities} \times \overline{R^2}} = 0.513$					

Source: researcher's findings

The Q² value for the foreign investment attraction factors (0.649) is positive and at a desirable level, indicating that the predictive power of the model for these variables is at an appropriate level. As shown in the table above, the GOF criterion value is 0.513, indicating strong model fit. Therefore, it can be inferred that the R² coefficient, Q² predictive relationship index, effect size criterion (f), and its significance (t-value) are all at acceptable levels, demonstrating the appropriateness of the structural models. The GOF value is also calculated to be greater than 0.36, indicating strong overall model fit.

6. Hypothesis Testing

The research hypothesis is:

- Foreign investment risk affects foreign investment attraction factors.

If the impact of the independent variable on the dependent variable is significant, the role of variability is confirmed. In addition to this method, the determination and effect coefficients were also used. Thus, to examine the hypothesis, the impact path of foreign investment risk on foreign investment attraction factors must be examined. The results related to the research hypothesis are shown in Table 11.

Table 11. Examining the main hypothesis of the research

independent variable	R ² The coefficient of determination	f ² Effect coefficient	Significance level	dependent variable
FDI risk	0.803	4.088	0.000	FDI attraction factors

Source: researcher's findings

The estimated values in Table 11 indicate that the foreign investment risk variable accounts for 0.80 of the variances in the foreign investment attraction factors. Considering the effect size index, this value is

estimated to be high (0.80). In other words, the foreign investment risk variable has a high explanatory power for the variance in the foreign investment attraction factors in various dimensions.

The effect of the foreign investment risk variable on foreign investment attraction factors is statistically significant. Therefore, the main research hypothesis that foreign investment risk affects foreign investment attraction factors is confirmed. Given the impact coefficient, it can be said that the effect of foreign investment risk on foreign investment attraction factors is positive, direct, and high, meaning that an increase in foreign investment risk can lead to significant changes in foreign investment attraction factors.

7. Discussion and Conclusion

In the research process, the results of the study are of great importance, as the conclusions can serve as a basis for addressing existing problems or improving the current situation towards a desirable state. Attracting direct foreign investments, considered one of the best ways to address capital shortages, access technology, and improve production processes, is a goal for countries. Studies show that in addition to economic factors affecting foreign direct investment risk, political and financial factors also have a significant impact on attracting foreign direct investment. The importance of these variables lies in the fact that governments can, with minimal physical cost, improve structures and ensure investment security, thereby reducing risk and achieving their goals by enhancing institutions and organizations. This study uses decision-making techniques to prioritize factors affecting foreign investment risk and then employs structural equation modeling to assess the impact of foreign investment risk on foreign investment attraction factors in Iran.

A review of the study results reveals that the findings regarding the risk factors affecting foreign investment risk align with previous research, such as Jalali et al.'s study on the impact of political risk on foreign investment in Iran, Reed W. Click's study on the impact of national and political risks on foreign investment in the United States, Kiani's study on foreign investment risk in Iran, and Ansari Samani et al.'s study on the relationship between economic, financial, and political risks and foreign investment in selected developing countries. The findings are consistent with these previous studies. In the second part, evaluating the impact of foreign investment risk on foreign investment attraction factors, a comparison between this study's results and those of Mohammadzadeh et al.'s study on the impact of political risk on foreign investment attraction, Raei and Fazelian's study on the impact of economic risk on foreign investment attraction in Iran, Kianpour and Piri's study on determinants of foreign investment attraction in MENA countries, and Moshiri and Kianpour's study on factors affecting foreign direct investment attraction shows that the results are consistent with these studies.

Given the results of this study, it can be concluded that foreign investment risk directly impacts foreign investment attraction factors. This article examines the impact of foreign investment risk on foreign investment attraction factors. The findings indicate that foreign investment risk factors such as economic risk, political risk, and financial risk positively influence foreign investment risk and indirectly affect foreign investment attraction factors. Additionally, the study's findings are useful in developing a theoretical model to explain the relationships between economic risk, political risk, financial risk, foreign investment risk, and foreign investment attraction factors.

References List

[1]	Adewal Samoel, H. (2022). Does Country Risk Influence Foreign Direct Investment Inflows? A Case of the Visegrád Four. <i>International Journal of Economics (MDPI)</i> . 10:221.
[2]	Alkhalidi, F., Alhammouri, B. (2017). Risk Determinants Investment Decision: An Explanatory Study. <i>Research Journal of Finance and Accounting</i> , Vol8, No20: 104-111
[3]	Ansari Samani, H., Mahmoudi, Z. and Namdari, S. (2015), Investigating the relationship between risk and foreign direct investment in selected developing countries (Dynamic panel data access), <i>Economic Studies and Policies</i> , 106(12), No 2, 71-104.
[4]	Azar, A., Gholamzadeh, R. and Ghanavati, M. (2012), <i>Path-structural modeling in management</i> , First, Tehran, Negah Danesh.

[5]	Bailey, N. (2017). Exploring the relationship between institutional factors and FDI attractiveness: A meta-analytic review. ELSEVIER. <i>International Business Review</i> . May.
[6]	Bekaert, G., Campbell, R., Harvey, C., Lundblad, D. and Siegel, S. (2016). "Political Risk and International Valuation". <i>Journal of Corporate Finance</i> , 37, 1–23.
[7]	Blonigen, B.A. (2005). A review of the empirical literature on FDI determinants. <i>Atl Econ J</i> 33(4):383–403
[8]	Bova E, Medas P, Poghosyan T (2018) Macroeconomic stability in resource-rich countries: the role of fiscal policy. <i>J Bank Finance Econ</i> 1(9):103–122
[9]	Click Reid, w. (2023). Financial and Political Risks in US Direct Foreign Investment. <i>Journal of International Business Studies</i> . 36,559-575
[10]	Duan, F. Ji, Q., Liu, B.Y. and Fan, Y. (2018). Energy investment risk assessment for nations along China's Belt & Road Initiative. <i>J Clean Prod</i> 170:535–547
[11]	Fetros, M. H. and Emami, M. (2013), Investigation of factors affecting foreign direct investment in Iran with an emphasis on the effect of patent rights, <i>Monthly Economic Magazine, Reviewing Economic Issues and Policies</i> , 2013, No. 12.
[12]	Gugerdchian, A., Fathi, S., Amiri, H. and Saeedi Varnamkhasati, N. (2016). Comparative analysis of political risk on the stock market development of selected countries. <i>Investment Knowledge</i> , No. 4, 135-156.
[13]	Harms, P. and Ursprung, H. W. (2002). Do civil and political repression really boost foreign direct investments? <i>Economic Inquiry</i> , 40(4), 651–663.
[14]	Henseler, J., Ringle, C.M. and Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. <i>Advances in International Marketing</i> 20. 277–319.
[15]	Jahangard, F. and Shir Mard, R., (2014), Investigation of the effect of foreign direct investment on the gross domestic product in Iran, the first national electronic conference on Iran's economic outlook with the approach of supporting national production, 2014.
[16]	Jalali, U. B., Ansari Samani, H., and Hatefi Majumard, M. (2017), The effect of political risk on foreign direct investment in Iran, <i>quarterly scientific journal of economic growth and development research</i> , 8th year, issue 29, (157-174).
[17]	Janicki, H. and Phanindra W. (2004). Determinants of foreign direct investment: Empirical evidence from EU accession candidates. <i>Applied Economics</i> 36: 505–9. [Cross Ref]
[18]	Jinjarak, Y. (2007). "Foreign Direct Investment and Macroeconomic Risk". <i>Journal of Comparative Economic risk</i> , 35(3), 509-519.
[19]	Kaufmann, D., Kraay, A. and Mastruzzi, M. (2007). Governance matters VI: governance indicators for 1996-2006. WB, pp 42–80
[20]	Kazemi, A., Beyk, M., Hadian, E. and Hakimi F. (2014), Identification and prioritization of factors affecting the attraction of foreign direct investment using the TOPSIS technique, <i>Journal of Financial and Economic Policies</i> , first year, No. 4, Spring 2012, 45-72
[21]	Kazemi, M. D. (2015), The effect of political risk on the attraction of foreign investment, <i>Iranian research journal of international politics</i> , 3th year, No. 1, Spring 2013.
[22]	Kiani, N. (2018), Investigation of foreign investment risk in Iran, 7th National Conference on New Approaches in Economic Management and Accounting.
[23]	Kianpour, S. and Piri, M. (2018). Determinants of foreign direct investment attraction in MENA countries (1980-2015), <i>Al-Zahra University's bi-quarterly economic development policy journal</i> , 7th year, 1st issue, summer and fall.
[24]	Liu, Y., Yuejing, G., Zhiding, H. and Shufang, W. (2018). "Culture and Capital Flows-Exploring the Spatial Differentiation of China's OFDI." <i>China Economic Review</i> 48: 27-45.
[25]	Mohammadzadeh, Y., Jahangiri, K., Rafah Kehriz, A. and Valizadeh, E. (2018), Investigation of the effect of property rights and political risk on the attraction of foreign direct investment using the PVAR method, <i>Scientific-Research Quarterly of Applied Economic Studies of Iran</i> , 7th year, number 26, 115-144

[26]	Moshiri, S. and Kianpour, S. (2019). Effective factors on foreign direct investment attraction, a cross-country study (1980-2007), <i>Quantitative Economics Quarterly</i> , No. 9, 1-30
[27]	Najarzadeh, R., Sabbagh Kermani, M. and Shaghaghi Shahri, V. (2006), Estimation of the supply function of foreign direct investment ranking in the member countries of the Organization of the Islamic Conference (OIC), <i>Quarterly in the member countries of OIC, Business Research Journal</i> , No. 5
[28]	Nieman, M.D. and Thies, C.G. (2012). Property rights regimes, technological innovation, and foreign direct investment. Under review paper.
[29]	Rai, R. and Fazelian, S. M., (2013), Investigating and providing a model of the relationship between country risk and attracting foreign investment in developing countries (with emphasis on the Islamic Republic of Iran), <i>Andishe Management Thought (Management Thought)</i> , 2013, No. 2 (series 12).
[30]	Raoufi, H. R. and Ghalam Zane Nikoo, K. (2012), Factors influencing the attraction of foreign direct investment in 27 selected countries (advanced and developing) including Iran, <i>Economic Sciences Quarterly</i> , 4th Year, No. 14.
[31]	Sabir, S. and Ahsan K. (2019). Impact of political stability and human capital on foreign direct investment in East Asia & Pacific and South Asian countries. <i>Asian Journal of Economic Modelling</i> 6: 245–56.
[32]	Salem, R. and Reem Y. (2021). The effect of country risk on foreign direct investment: Evidence from Egypt. <i>Scientific Journal for Economic and Commerce</i> 51: 276–43. [Cross Ref]
[33]	Sethi, D., Guisinger, S.E., Ford, D.L. and Phelan, S.E. (2002). Seeking greener pastures: A theoretical and empirical investigation into the changing trend of foreign direct investment flows in response to institutional and strategic factors. <i>International Business Review</i> , 11(6), 685–705.
[34]	Shahabadi, A. and Mahmoudi, A. (2007). Determinants of foreign direct investment in Iran. <i>Two quarterly economic essays</i> , No. 5, 89-126.
[35]	Sissani, M. and Zairi B. (2014). The effect of political risk on foreign direct investment: The case of Algeria. <i>Hyperion Economic Journal</i> 2: 29–35.
[36]	Sookram S., Hosein R., Boodram, L. and Saridakis, G. (2021). Determining Factors of FDI Flows to Selected Caribbean Countries. <i>Journal of Risk and Financial Management</i> . 15(2). P48
[37]	Stone, M. and Geisser, F. (1975). Cross validatory choice and assessment of statistical predictions. <i>Journal of the Royal Statistical Society</i> , 36(2), 111-147
[38]	Tafur, Y., Lilford, E. and Aguilera, A. F. (2021). Assessing the risk of foreign investment within the petroleum sector of South America. <i>Springer Nature Journal</i> . April. 2:56.
[39]	Tenenhaus, M., Amato, S. and Esposito Vinzi, V. (2004), A global goodness-of-fit index for PLS structural equation modeling, <i>Proceedings of the XLII SIS Scientific Meeting</i> , Vol. Contributed Papers, CLEUP, Padova, pp. 739–742.
[40]	Tsoneva S.T. (2021). Literature Review in Field of Factors Influencing the Attraction of FDI and Its Spillover Effects. <i>International Journal of Economics and Finance</i> . V13. No5. P56
[41]	White, G.O., Boddewyn, J.J. and Galang, R.M.N. (2015). "Legal System Contingencies as Determinants of Political Tie Intensity by Wholly Owned Foreign Subsidiaries: Insights from Philippines". <i>Journal of World Business</i> , 50(2), 342-356.
[42]	Wojciechowski, L. and Krzysztof W. (2016). Determinants of inward FDI into Visegrad countries: Empirical evidence based on panel data for the years 2000–2012. <i>Economics and Business Review</i> 2: 34–52. [Cross Ref]
[43]	Yang, L. (2021). The Evaluation Model of Legal Risk of Enterprises' Foreign Investment Based on Data Mining. <i>Journal of Physics. Conference Series</i> . 1744.
[44]	Yu, M. and Wang, Na. (2023). The Influence of Geopolitical Risk on International Direct Investment and Its Countermeasures. <i>Sustainability</i> . January. 15.2522

- [45] Zhang, M., Wang, H., Yang, H. and Li, F. (2022). Does foreign aid reduce the country's risk of OFDI? The Chinese experience. *Journal of International Studies of Economics*. Volume 18, Issue 3. Pp 238-258