International Business Management 10 (10): 1817-1820, 2016
ISSN: 1993-5250

Identifying and Prioritizing the in Fluential Factors in Attracting Foreign Direct Investment

Mohammad Ali Abdolvand and Seyed Mohammad Hosein Mousavi
Department of Management, Science and Research Branch,
Azad Islamic University, Tehran, Iran

Abstract: Foreign direct investment is an investment that aims to achieve sustainable benefits in a country other than the investor's home and purpose of investor in this investment is to have an effective role in business management. The impact of foreign direct investment spectrum is very wide such as economic growth rate, employment, technology transfer and production techniques, strengthening and expanding international and financial resources increase research and development increase efficiency, impact on imports and exports and payments balance increase in competitiveness and growth of national technology and employment capacity and firms growth, each of which in turn has complexities. Therefore, using the appropriate literature in this study we investigated the influential factors on attracting foreign investment. Then, these factors were identified through Chi-square test and were prioritized using the Shannon entropy. Results showed that the rate of return on investment, economic growth and infrastructures are the most important factors in attracting foreign direct investment.

Key words: Foreign direct investment, rate of return on investment, economic growth, infrastructures, national

INTRODUCTION

Foreign direct investment is one of the most important ways of financing, particularly in developing countries. In this context, given the fact that the economic crisis has a negative effect on investment, assessing the determinants of this type of investment is important (Barassi and Zhou, 2012).

In other words, foreign investment in the developed economy of today's world, the development of transnational companies to improve competitiveness increased profit, access to cheaper labor markets and reach a broader consumer market lead to a presence in multiple regions as this issue has increased significantly with the advancement of technology, easy transfer of capital and the development of foreign trade. Since 1970s, foreign direct investment growth has been very fast and outpaced trade growth in a way that was more than double export growth of goods and services.

Basically, financing sources for the administration and infrastructures of the country is inevitable and there are several approaches available. Foreign investment and attracting these capital investment though investee countries is one of the most effective and the quickest and most efficient ways mentioned above. Theoretically, all economists consider capital as the driving force of growth and economic development of societies and treat all models design economic development on the basis of this theory. Use of foreign investment through optimum utilization of production resources is considered as the most important factors to achieve the economic development of communities. Foreign investment is defined as the transfer of funds or materials from one country to another country establish a business in exchange for direct or indirect participation of its income (Gastanaga *et al*., 1998).

Some economists consider foreign direct investment as part of international trade. In this approach, foreign direct investment is based on international regulations. According to the theory of international production. According to OLI theory which is known as theory of Dunning international production, the flow of foreign direct investment is a function of locations.

Determinants of foreign direct investment are the functions of the locations, the benefits of origin and destination and communication factors. It is worth noting that in the past, different ideas and views on the consequences of foreign direct investment in the host

Corresponding Author: Mohammad Ali Abdolvand, Department Management, Science and Research Branch, Azad Islamic University, Tehran, Iran

country had existed and in some countries, due to the risk of economic independence, political adjustments and cultural consequences, attracting this capital was faced with uncertainty and suspicion. But today most of the countries in the world believe that the attraction of foreign capital helps deficiency of capital, knowledge, technology and new management techniques. So, many countries, even the developed countries, tried to identify the factors to fit the foreign capital entry and adapting it to their own situation. Therefore, it is important to identify factors affecting the flow of foreign direct investment and perhaps it is the only way to enjoy the benefits of international capital flows. Due to the above discussions, the researchers aims to identify and prioritize the influential factors in attracting foreign direct investment in the present study.

Literature review: Babaeimehr and Esmailnasab analyzed the impact of West sanctions in the reduction of attracting foreign investment and its reasons for the success. According to the evidence and documentation provided in this study it is concluded that the economic sanctions, put the investment and development of Iran's oil and gas industry into significant obstacles and challenges and led to slow pace of development in recent years; therefore, the impact can be reduced by adopting legal measures. Banga (2003) studied economic sanctions and its role in foreign investment in Iran. Expanding economic sanctions against the country has put a considerable pressure on the Iran economy. The study shows that new sanctions had been carried out in order to stop foreign investment in Iran. Statistics provided by the international organization of unctad through the analysis of Foreign Direct Investment (FDI Performance Index) indicates that Iran had a poor performance despite having a high potential to attract foreign investment. Accordingly, sanctions against Iran can be considered as the most important reasons that happened (Theo *et al*., 2012).

Musa Ahmad evaluated the effects of foreign direct investment overflow on Malaysia economic growth during years (1999-2008). By using the estimated regression equation (OLS), the results showed that the inflow of foreign direct investment had a negative effect on total efficiency of production factors inputs. Erdal and Tatoglu (2002) examined the relationship between foreign direct inward investment and industrialization process using panel data from 49 countries during the years (1980-2009) in Africa. The results showed that foreign direct investment does not have a significant impact the industrialization of these countries while the other variables such as market size, financial sector and international trade were the factors affecting countries industrialization. Adams evaluated the effects of FDI on economic growth in 22 countries in sub-Saharan Africa during 1980-2011. Using the estimation method of (GMM), results showed that both FDI and regulations (the regulations, the regulations of the credit markets, business regulation and labor market regulations) do not have a significant independent effect on economic growth; however interactions between them have a positive significant effect on economic growth.

According to available studies, important factors in attracting foreign investment can be divided into three general categories:

- Economic factors
- Socio-economic factors
- Natural-cultural factors and historical background

MATERIALS AND METHODS

The present study is practical and it is descriptive objectively; in terms of strategy it is a survey research. The population of the study included all experts in finance and economics of economic affairs and finance executive organs, province governors, ministry of industries and business, chamber of commerce in Tehran. The sample included 300 experts. Questionnaire interviews and observation were used for assessment. The questionnaire consists of questions about the factors affecting foreign direct investment. The validity of the questionnaire was confirmed through professor and expert and consultants and their comments were applied. The data were analyzed by using SPSS Software.

Shannon entropy: When data of a decision matrix are completely specified, entropy method can be used to measure the weights. Entropy is a very important concept in the social sciences, physics and information theory. In information theory, entropy is a measure of uncertainty that is expressed by P_i probability distribution. Measuring this uncertainty is described by Shannon as follows:

$$E_i = S(P_1, P_2, ..., P_n) = -K\sum_{i=1}^{n} P_i \, Ln(P_i) \qquad (i = 1, 2, ..., m) \tag{1}$$

In this regard, K is a constant amount and since the above equation is used in the statistical analysis, it is called the probability distribution entropy. The words entropy and uncertainty are used in the same concept. When P_i are equal to each other (for given i and j values) $P_i = 1/n$ is considered. In a decision matrix P_{ij} assessment can be used for the different options. m options and n indexes can be considered in the decision. The results of the decision matrix for $(P_{ij})_j$ index are as follows:

$$P_{ij} = \frac{r_{ij}}{\sum_{i=1}^{m} r_{ij}} \quad (j = 1, 2, ..., n)\forall_{ij} \tag{2}$$

E_{ij} entropy is calculated as follows:

$$k = \frac{1}{m} \tag{3}$$

E_j value is between zero and one. Then, d_j amount (deviation degree) is calculated; it states to what extent, the (j) index provides useful information for decision-makers to make decision. The more close the measured index values to each other, the less difference in competing options in regard to the same index from one another. Thus, the role of index in decision-making should be reduced as the same:

$$d_j = 1\text{-}E_j, \ \forall_j \tag{4}$$

Then, W_j weight is calculated in which the best weight is selected:

$$w_j = \frac{d_j}{\sum_{j=1}^{n} d_j}, \ \forall_j \tag{5}$$

RESULTS AND DISCUSSION

Data analysis: After collecting the questionnaires, the first test was to check the data normality. The results showed that the data were not normally distributed. Thus, according to a review of their influential factors in attracting foreign direct investment we used Chi-square test. Finally we used Shannon entropy method to rank the factors. In Table 1, the χ^2-test of factors is presented.

As can be seen, all factors were confirmed except government expenditure and avoiding global economy and their significance level is <0.05. Now, Shannon entropy method is used for ranking. The ranking results are shown in Table 2.

As can be seen in Table 2, "rate of return on investment, economic openness and infrastructure" are the most important factors in attracting foreign direct investment from the perspective of economic elites and experts.

Table 1: χ^2-test for influential factors in attracting foreign direct investment

Factors	Chi-square	Degrees of freedom	Significance level
Exchange rate	27.684	4	0.000
Rate of return on investment	13.579	4	0.009
Infrastructures	18.158	4	0.000
Inflation	51.895	4	0.000
Economic growth	18.947	4	0.001
Avoiding world economy	30.947	4	0.102
Government expenditure	50.526	4	0.100
Economic openness	17.684	4	0.004
Corruption and capital risk	47.789	4	0.000
Liquidity	84.947	4	0.000
Market size	45.579	4	0.000
Human capital	38.211	4	0.000
The volume of domestic investment	25.368	4	0.000
Foreign debt	53.158	4	0.000
Employment support policies for regulatory quality	40.105	4	0.000
Tax	22.853	4	0.000
Natural resources	13.221	4	0.009
Investment security	18.442	4	0.001

Table 2: Shannon entropy for influential factors in attracting foreign direct investment

Factors	Entropy	Deviation degree	Weight
Exchange rate	0.979868	0.020132	0.054732
Rate of return on investment	0.967330	0.032670	0.088819
Infrastructures	0.974245	0.025755	0.070021
Inflation	0.983950	0.016050	0.043636
Economic growth	0.976398	0.023602	0.064166
Economic openness	0.969248	0.030752	0.083606
Corruption and capital risk	0.982594	0.017406	0.047323
Liquidity	0.986978	0.013022	0.035402
Market size	0.981755	0.018245	0.049602
Human capital	0.981111	0.018889	0.051354
The volume of domestic investment	0.979806	0.020194	0.054903
Foreign debt	0.984348	0.015652	0.042553
Employment support policies for regulatory quality	0.981126	0.018874	0.051312
Tax	0.979497	0.020503	0.055741
Natural resources	0.946658	0.053342	0.014502
Investment security	0.977265	0.022735	0.061809

CONCLUSION

During the last two decades, various forms of capital flows ha the high growth including FDI, foreign investment in securities, bank loans, bonds and derivatives including alternative currencies transaction, the share purchase, futures and reinsurance. The role and importance of FDI is far higher than other tools. Therefore in this wetried to identify and rank influential factors in attracting foreign direct investment. Results showed that the rate of return on investment, economic growth and infrastructures are the most important factors in attracting foreign direct investment.

Investment compliance for foreign investors is in their profits (UNCTAD, 1999), so investment decision depends on in the economy which the risk and return of capital. Portfolio theory confirms that capital flows in economics with low risks and high rates of return.

Risk-adjusted rate of return on investment in a risky economic should be reasonably high to attract foreign capital. This variable is measured by capital productivity (final product) and it is expected to have a positive relationship with foreign direct investment flow. Economic openness has two opposite effects. First, it leads to development of export-oriented foreign direct investment and second it has negative effect on market-oriented foreign direct investment. The openness of the economy is measured through total exports and imports of goods and services as a share of GDP. Economic openness can be studied through two dimensions:

- Market-oriented foreign direct investment
- Export-oriented foreign direct investment

The purpose of market-oriented foreign direct investment is to invest in a country for the supply of goods and services to the local market. This type of investment may be responsible for the maintenance and protection of existing markets by creating interest in new customers or expanding domestic markets. In this case, foreign direct investment is done despite creating export restrictions in the host country to meet domestic needs. On the other hand, export-oriented foreign direct investment objective is to use specific and certain sources in host countries so that the produced product will be exported to the supplier country or the third country. Infrastructure is crucial to the economic environment. Proper infrastructure leads to economy progress toward growth with no significant deviations. Typically infrastructures are not only like physical infrastructure such as roads, ports, etc. but they also include good functioning of the institutions in the country. Foreign investors prefer economies with a developed network of roads, airports, water supply, uninterrupted power supply, telephone and Internet. Poor infrastructure increases the costs of economic activities and reduces the rate of return on capital.

REFERENCES

Banga, R., 2003. Impact of government policies and investment agreements on FDI inflows. Indian Ouncil Res. Int. Econ. Relat., 116: 63-70.

Barassi, M.R. and Y. Zhou, 2012. The effect of corruption on FDI: A parametric and non-parametric analysis. Eur. J. Political Economy, 28: 302-312.

Erdal, F. and E. Tatoglu, 2002. The determinants of foreign direct investment in the manufacturing industry of Malaysia. J. Econ. Cooperat., 26: 91-110.

Gastanaga, V.M., J.B. Nugent and B. Pashamova, 1998. Host country reforms and FDI inflows: How much difference do they make?. World Dev., 26: 1299-1314.

Theo, S., H.L. Eicher and A. Lenkoski, 2012. Robust FDI D eterminants: Bayesian model averaging in the presence of selection bias. J. Macroecon., 34: 637-651.