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**Problems connected with measuring risks  
of foreign direct investments**

**Abstract**

Any human activity, including the economic one, is carried out under the conditions of uncertainty, which arises from the complexity of reality. Uncertainty is closely related to risk. The concepts of uncertainty and risk, and thus the relations between them are not defined in the same way.

The literature gives different criteria for the classification of the investment risk. With respect to the FDI, a risk can be divided into a general risk, associated with investing, and a special risk, arising from the location of investments outside the country of the investor's origin. The special risk is usually divided into political (considered crucial) and economic, and both these groups of risks are microeconomic and macroeconomic.

A multitude types of investment risks and their globalization make it difficult to identify all their sources and their assessment, which makes the decision about investing not an easy task. Additionally, a number of important determinants of management is difficult to calculate or irrational, which further complicates the decision-making process.

**Keywords:** uncertainty, risk, FDI risk, FDI risk measurement.

**JEL Classification:** A00.

**Introduction**

In the era of economic integration and globalization, an intensification of internationalization of economic activity has been observed. In these circumstances, the contemporary economic reality becomes more and more complicated. There are still appearing new threats for business entities, especially those who make investments abroad in the form of direct investments (FDI).

In the literature, there is no unambiguous definition of this type of investment. It is proposed to adopt the most complete one, covering the following ways of entering a foreign market: a creation of new business entities from scratch (new facilities), an acquisition of whole or part (allowing for efficient management, unless other circumstances arise, such as representation in the board of directors) of already existing businesses, mergers.

Then investors have to face the domestic competition in the country of the investment, for which the domestic market is better known. The knowledge of potential threats has a significant influence on making investment decisions. However, it can be concluded that the identification of threats in the complex reality is not an easy task, especially that a number of important determinants of management is difficult to calculate or irrational. This fact makes it difficult to perform tasks that make up the investment risk management, whose one of the stages is the identification and assessment of risks.

The major aim is the analysis of the basic problems associated with the identification and assessment of the FDI risk, whilst the minor aims are: identification of the concepts of uncertainty and risk, as well as systematization of the FDI risks.

## **1. Uncertainty and risk**

It is assumed that any human activity takes place under conditions of uncertainty, which is an inherent feature of reality resulting from its complexity. It is proposed to clarify the understanding of uncertainty to the fact that not only is it the result of insufficient amount of information that underlay the decision-making process (lack of data, awareness of existence of some factors – Marcinek 2004), but also its quality and misunderstanding the problem, and it also relates to predicting the effects of the decision.

Uncertainty is closely related to risk, which is a phenomenon subject to quantification or subjective assessment. However, not only the concept of uncertainty, but also the risk, and thus relations between them are not defined in the same way. The two concepts are often understood as synonymous (Jedynak, Szydło 1997; Beck 2004; Michalak 2004; Pawłowski 2004; Listkiewicz et al. 2004; Kawa, Wydymus 1999). Most of the researchers involved in this issue point to some important aspects of evolution of the uncertainty and risk theory, which are described hereunder.

A.H. Willet was the first researcher to present differences between the concepts, it was in 1901. He wrote that risk is an objectified uncertainty of occurrence of adverse event and changes with uncertainty, and not with the increase of the probability level. Thus, risk is objective, and uncertainty is subjective (Kaczmarek 2008; Tarczyński, Mojsiewicz 2001).

A groundbreaking event was commonly emphasized in the literature announcing of the theory of measurable and immeasurable uncertainty by F. Knight in 1921. According to this uncertainty in the strict sense is the immeasurable uncertainty and risk is that part of uncertainty which can be measured or at least estimated. Specifically, the risk are both negative and positive deviations from the expected state, which can be determined by means of the theory of probability: mathematical, statistical or estimated. However, F. Knight had a critical attitude towards transferring the achievements of the natural science to the social ground and argued in favor of unreliability of the probability theory in the face of the complexity of the world and uniqueness of the events, which the social science deal with. He considered the possibility of the business insurance against negative effects a factor that distinguishes the uncertainty from the risk (Madej 2007; Zachorowska 2006; *Ekonomia menedżerska...* 2008; Ostrowska 1999b; Ostrowska 2002; Jedynek, Szydło 1997; Listkiewicz et al. 2004).

In this approach the notion of risk has been extended in comparison with its ordinary understanding as only a negative phenomenon. With reference to F. Knight's theory, it is emphasized that the effects of decisions made may be unidirectional (loss) or multidirectional (loss, profit). Accordingly, different types of risks are distinguished: in negative apprehension, called pure or negative-positive (a positive or negative phenomenon), called dynamic, speculative – it is typical in gambling, but it also appears in business practice, e.g. foreign exchange risk. In the first case, the criterion of cost-effectiveness of risk is most often minimization of consequences of loss, in the second one – choice of the option with the highest expected surplus of profit over loss (Sienkiewicz 1998; Ahn, Fallon 1991; Kaczmarek 2008; Zachorowska 2006; Owczarski 1999, 2000).

In a slightly different approach, a negative and neutral concept of risk is highlighted. The first one treats it as a threat of a failure to achieve the desired affect and does not indicate loss clearly. The second one, on the other hand, conceives it as a possibility of achieving an effect worse or better than expected, and it is consistent with the above presented negative-positive apprehension (*Zarządzanie ryzykiem* 2009).

Besides A.H. Willet and F. Knight, one of the most often quoted researcher of the subject is J. Pfeffer. He described the relations between uncertainty and risk in the way that uncertainty as a psychological category is measured by the level of belief in the occurrence of the phenomenon (a subjective criterion), and the risk is a combination of gambling and can be measured by probability (an objective criterion). On this basis he concluded that uncertainty is a state of mind, and risk – a state of the world (Kaczmarek 2008; Tarczyński, Mojsiewicz 2001; Listkiewicz et al. 2004).

Today, most authors define uncertainty as a state in which future possibilities and chances of their occurrence are not known. On the other hand, risk exists when: the achieved future result is not known, but it is possible to identify future situations and probability of realizing individual possibilities is known. Thus, a general uncertainty and a specific uncertainty are distinguished, and the latter is synonymous to the concept of risk (Tarczyński, Mojsiewicz 2001; Zachorowska 2006). The higher the risk is, the lower the probability of achieving the intended outcome is, and the lower the risk is, the higher the probability of achieving the intended outcome is (Czerwieniec 2007). However, it should be noted that the distinction between uncertainty and risk on the basis of probability theory is a major simplification nowadays. G. Shackle's contribution cannot be missed here; he distinguished the concept of uncertainty and risk on the basis of an experimental criterion. He identified two types of experiments – divisible and indivisible. A divisible experiment is: many analogical changes with sufficiently large numbers, the result of which can be predicted to a lesser or greater extent by using the probability theory. An indivisible experiment is: analogical changes, but taking place in different conditions or unique changes characterized by inability to apply the probability theory (Zachorowska 2006).

The issue of measurability of risk will be discussed in more details in the section on identification and assessment of the FDI risk.

With respect to the FDI it is assumed that the risk of making them is understood as the negative deviations from the intended results of activity. It means that there is a possibility of achieving benefits on a smaller than expected scale, no benefits or even a loss. This state is called a failure of investing and unfortunate investment. The expected benefits are generally proportional to the degree of risk – the higher the risk is, the higher the expected benefits are. The scale of foreign investment risk is enhanced by factors connected with lesser knowledge of conditions of running a business in another country, and thus with advantages of local businesses. In this situation investors expect more advantages than those that they could get in their home country – they count on higher salaries (bonuses) as a compensation for taking additional risk (Karaszewski 2004).

## **2. Types of the FDI risks**

There are different criteria of investment risk classification. With respect to investments made abroad, the clearest allocation of risk seems the one comprising (Karaszewski 2004; Szóstek 2008):

- a general risk connected with investing (there are many of its factors that stem from various interrelated groups of threat sources of investment projects),
- a special risk associated with the location of the investment outside the investor's home country.

The special risk relates to investing outside the country of the investor's origin, and therefore the concept of international investment risk is sometimes used in this sense. It has no commonly accepted definition. It is mainly associated with difficult to predict adverse changes affecting the effects of economic activities on foreign markets, which cannot be known *ex ante*. There are three main groups of factors affecting this risk: macroeconomic environment of the host country, the competitive environment (industry) in the country, the business risk also in the country (Sitek 1999). The special risk therefore results from the mentioned lesser knowledge of the conditions of running a business in the country of investment. This risk is associated with general intent to make investments abroad, and with particular intent concerning the country of investment – the risk of the country – it is a danger of loss (failure to meet expectations), which stems from investing funds abroad and cannot be reduced to a single object of investment, it is connected with the specificity of the country, e.g. with general business cycle, the way the government works, etc. Due to the fact that most of the above-mentioned factors distinguishing international investment activity from the domestic one is a resultant of politics, the special risk is usually divided into two main categories: political and economic. In practice it is not always possible to differentiate them in a satisfactory manner (Bielawska 2005). The types of risks in both groups are microeconomic and macroeconomic.

The political risk is considered crucial in the hierarchy of investment risk as it is primary compared to the other types of risks (Sitek 1999; Jędralska 2003). It is caused by lack of full information concerning the political relations in the country (possibilities of their changes) and social, legal, institutional, religious and cultural determinants – in some classifications the types of investment risks resulting from these determinants are pinpointed regardless the political risk (Zachorowska 2006). This reflects different perception of the political risk. The political macroeconomic risk, connected with the whole political situation in the country of investment, concerns all being realized there and realized foreign investments in a similar range. The political microeconomic risk stems from changes of political conditions in the country of investment in relation to specific economic activities or market segments, particular businesses, banks and investment projects (Karaszewski 2004; Najlepszy 2000).

The economic risk is a result of lack of full knowledge of the economic situation in the country of investment, both the whole economy (the macroeconom-

ic risk) and specific types of economic activities, companies on the counterparty's internal market and regions (the microeconomic risk). Companies that are particularly liable to macroeconomic risks are those whose foreign parts are dependent on local markets of goods, labor and raw materials. Then there appears a correlation: the greater dependence, the greater risk. The economic risk that is microeconomic consists of following types of risks:

- exchange rates,
- inflation,
- interest rates,
- foreign market downturn,
- taxes,
- laws,
- institutions.

The economic risk that is macroeconomic consists of such risks as:

- ensuring effective cooperation links (a vertical integration),
- connected with localization: abiding the contract terms (a debt risk), capturing the local market, which is entering the market (a demand and competitiveness risk), concerning transport and storage (efficiency of transport and communication systems), acquisition of production factors under assumed conditions (availability of labor, energy and water supplies, raw materials and semi-finished products).

The microeconomic risk is smaller when the available information about general environment conditions of is country is more precise (Karaszewski 2004; Bielawska 2005).

An essential problem which makes it difficult to effectively run enterprises is shifting exchange rates. This frequently floating regime is characteristic for currencies of developing countries. Changing rates cause high uncertainty regarding costs and incomes of investments, thus, a previously prepared economic calculation may well soon become invalid.

Interesting situation takes place when FDI's are made in economically integrated areas with one single currency.

The unifying of the currency ought to support FDI. Due to the common currency the businesses have access to a relatively cheap capital. The main factors of attracting FDI's to united currency areas are: lowering the risk of shifting exchange rates, maximizing macroeconomical stability, and therefore improving the investment attractiveness of the country. The above help to calculate the viability of the investment and stability of economic calculations.

However, the unified currency may withhold FDI's because the export is no longer encumbered by exchange rate risks. That applies to horizontal investments

involving transferring of the whole production process in order to ensure a better access to the trade area. Overseas trade becomes then substitutable to the investment.

The matters are different when it comes to enterprises aiming at maximizing effectivity. The production process is divided into stages being realized in different countries. Those processes are called vertical investments, which favor commercial exchanges, and so are complementary to overseas trade.

Currency union helps to avoid the costs of buffering against shifts of exchange rates (which refers to businesses involving activity on international scale).

Removal of the risks of shifts in exchange rates leads to decreased interest rates. The costs of obtaining the capital are lower and later the rate of national investments rises.

In case when a state is not a member of EMU but is a member state of economic union, for instance an EU Member State, the political risks are greatly limited. It is due to the standardization of conditions of business running regulations. The process of stabilizing the member states' economical policy towards FDI's takes place, and the free movement of capital within the member states becomes the primary aim. It also enhances FDI's movements within the integrated area.

In view of the increasing globalization of economic processes and phenomena, and the intensity of efforts of many countries to integrate into this global economy, in some classifications an increasing global risk stands out (White, Fan 2006; Kaczmarek 2008). A German sociologist U. Beck writes about a global society risk (Beck 2004). The risk in question comprises all business entities and all countries. It applies to business entities irrespective to whether their activity falls within a national economy or goes beyond it. Under current conditions the risk arises from maladjustment of business entities, especially companies to globalization (Szymański 2005). It is a systematic risk on a global scale. As such, it is shaped by different factors, among them: stemming from natural phenomena (e.g. drought, flood, earthquake, volcanic eruption), social events with the widest range (most often associated with the occurrence of epidemic or epizooty), political factors (it mainly refers to creating conflicts that trigger military actions between countries), economic factors (their global reach may lead to world economic crises), technical factors (computer viruses) (White, Fan 2006; Ostrowska 1999a; 1999b; 2002).

### **3. Identification and assessment of the FDI risk**

A multitude of types of investment risks, as well as their globalization connected with the changes and trends in the modern world cause that it is not easy

to identify all the risk sources and assess it as a basis for making decisions. Therefore, in order to optimize decisions one must identify and assess many possible types of investment risk, which should be considered comprehensively. It is even said that in the investor's strategy not only should the types of risk be specified, but also its structure and intensity of occurrence. After P.F. Drucker the intensity of risk occurrence is divided into: the risk that needs to be taken, it is always a part of the nature of economic activity; the risk that one is able to take; the risk that one is not able to take; the risk that one has to take (Tkaczyk 2005).

In fact, it is not so much of a risk assessment in itself, but its impact on the efficiency of the investment (Bernstein, Damodaran 1999; Pawłowski 2004; Tarczyński, Mojsiewicz 2001; Jajuga 2000; Zarzecki 2006; Ciborowski, Gruszewska, Meredyk 2001; Woźniak-Sobczak 2001; Dubik 2005). Some of the risk types are so small that they can be considered insignificant. Furthermore, the source of risk may cause many different effects, which can influence the investment in a different degree. In addition, the susceptibility of investing entities to the same level of risk is diverse. Potential losses resulting from a particular risk may be assessed and tolerated by investors in different ways, which mainly depends on the financial condition, the potential of the economic entity and attitudes towards risk. Therefore, it is advisable to order the types of risks according to their possible effects, followed by focusing on the most serious threats (Szóstek 2008; *Ekonomia menedżerska...* 2008).

In the overall investment risk analysis a national risk, which allows to place the country on the map of investment risk, is taken into account. For this one should analyze the risk of the line of business and the regional risk. Both indicate diversity of the investment risk, and thus the effectiveness of management in particular industry and regions of the country.

As it was previously pointed out, most of the factors specific to the investment activities undertaken in more than one country are a derivative of politics. In the studies on the foreign investment risks, great importance is most often given to the political and economic risks. However, there are connections between the political and economic risks. Although, it has been indicated that the political risk is primary and crucial, on the other hand it is influenced by the economic situation of the country. Based on a review of political risk rankings, one can get the impression that sometimes (Euromoney) the line dividing both risks is blurred.

If we were to stay on the assumption of the primary and crucial nature of political risk, it would be because of ambiguity of the factors constituting political conditions, and hence the ambiguity of political risk components, its analysis is not a simple matter. In practice, to assess political risks one use models of



different degrees of formality and a two-stage approach, which is the macroeconomic analysis (determining the general level of the political risk in the country) and the microeconomic analysis (determining it for the industry or the market segment, the bank, the company or the investment project). The general political risk, regardless of size, does not affect the industries and companies in the same way. For some companies and investors, political instability and economic difficulties may create exceptionally favorable trade and investing opportunities. Then it would be too big simplification to rely only on the results of the macroeconomic analysis. It would imply the assumption that every company is exposed to the same political risk, regardless the specific circumstances of their business (size, profile, capital structure, etc.). The differentiated situation of the companies requires the political risk assessment to be based on the specific analysis of its implications for current business and financial conditions of operation. In many countries, determining the probability of expropriation and nationalization is crucial. The governments of most countries rarely confiscate the assets without providing a financial compensation. The tendency to expropriate is largely connected with economic benefits, gained from adoption of foreign investors. The higher the benefits are, the higher the alternative costs of expropriation of foreign companies are, and thus, the lower the political risk of foreign investment confiscation is (Najlepszy 2000; Stepniak 1996; Stepniak, Umiński 1998).

Cultural and social differences between countries should be a very important factor in the risk assessment in making the FDI. They have a big influence on the way the negotiations are conducted, the choice of markets and the entry strategy. The most often mentioned differences are: language, religion, race, nationalism and its influence on social attitudes, trading and social customs, level of education and its model, social state policy, the rate of social changes and the level of urbanization, the class structure of society and patterns of behaving (corruption, obeying the law, work ethics, and others). The risk that has its origin in the mentioned differences is manifested as difficulties in communicating and understanding of people from different cultures. Serious problems in their communication may influence the level of management. In contrast to this, communicating of people of the same culture means a high level of compliance in the perception of economic environment (Sitek 1999).

Taking into account the identified factors seems to be necessary in the face of more and more often putting forward an argument that non-economic factors have got a greater influence on the economy than those purely economic. Thus, one should use a holistic approach underlying the aforementioned systemic approach to study all economic phenomena, including the risk from the theoretical point of view and for the needs of economic practice. Unfortunately, it is diffi-

cult to measure cultural and social factors and that makes them being taken into account to a lesser extent. The same applies to natural factors, which also significantly influence the economy.

Meeting the above outlined demands of investment risk identification and assessment turns out to be very difficult in reality, not only because of the multiplicity of its types, their character and globalization, but also insufficient information. Therefore, many simplifications are often accepted, based on intuition and flexibility (Jedynak, Szydło 1997).

To assess the degree of the investment risk, one uses not only mathematical methods, but also experiences of the course of events in the past, which allows to predict the risk subjectively. It is believed that in the latter case instead of using such concepts as computing, measurements or quantification, as found in the literature, estimation should be used. The information obtained by both methods is presented in numbers and as such appear to be the most convincing from the decision-maker's point of view, and it is particularly important in the view of some alternative solutions. However, mathematics and subjective evaluation cannot be applied to all types of risks. Then a descriptive form of creating a scenario explaining the potential effects of the risky decision is used. The level of risk is expressed by some categories, e.g. very low, medium, high, very high. This assessment is qualitative (Madej 2004; Zachorowska 2006; *Ekonomia menedżerska...* 2008; Ostrowska 1999b; 2000; Jedynak P., Szydło 1997; Listkiewicz et al., 2004; *Zarządzanie ryzykiem* 2009; Marcinek 2000).

Specialized international or global institutions deal with assessing the investment risk (rating agencies or other organizations, banks). This assessment (rating) enables creating rankings of risks, which mostly are international, trade or regional (Zachorowska 2006).

In the case of FDI, published ratings are generally helpful. The investors conduct their own research based on individual selection of criteria and prioritization of their assessment and negotiations with entities in the country of potential investment. In their own research they can rely on information from sources such as: governments and government agencies, banks, institutions dealing with foreign settlements, specialized magazines, fact-finding visits. Information from governments and banks is considered the most reliable. Investors conducting their own research follow their individual preferences in terms of wanted location factors for a more efficient use of resources (Sitek 1999; Bielawska 2005).

## Conclusions

It follows from the above argumentation that in today's complex economic reality there are serious difficulties associated with the use of quantitative methods in risk management in the investment activity. They would allow to calculate the risk, and information presented in numbers is more convincing. Difficulties we are referring to stem from the fact that it is not always possible to use mathematical methods to calculate the investment risk. A number of threats are difficult to measure or even non-measurable. They often arise from non-economic determinants of economic processes, which – as it is often believed – are more important than economic determinants.

It is not always possible to substitute quantitative methods with a method depending on subjective risk estimation on the basis of experience in the course of events in the past. Then, a qualitative method is used, which employs a descriptive form – the level of risk is expressed by some categories, e.g. low, medium, high.

The problems with measuring the investment risk impede making the economic decision. It is particularly severe in terms of increased competition, and it must be noted that investors investing abroad for the first time in the country seem to be in a weaker position in relation to domestic investors who know the market.

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