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REVIEW OF FDI THEORY IN THE KNOWLEDGE–INTENSIVE ECONOMY

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Abstract

International flow of capital in the form of Foreign Direct Investment (FDI) is considered to be the primary form of capital transfer in the global economy. It plays an important role among other forms of international capital flows, due to the intensity of its streams and its strength of impact on local economies. Host countries use FDI to finance activities such as industry restructuring and transfer of technology. The aim of this paper is to present current achievements in the field of theoretical explanations of FDI – its main motives. The article relates also to current selected trends in FDI flows during the economic downturn caused by the recent financial crisis. Above all ,however, this paper aims at showing FDI theories in terms of a knowledge intensive economy.

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Introduction

Foreign Direct Investments (FDI) are considered to be the primary form of international flow of capital in the global economy. They are known to have a significant strength of impact on the host and home economies, and from the perspective of a host country they are a convenient form of international transfer of capital and technology as well as a form of financing various restructuring processes. Furthermore, in a growing number of cases, they are also a way to participate in the global chains of production. In the case of countries that do not have a sufficient level of capital, FDIs are sometimes the only stream of money for sustainable development (Pilarska, 2005, p. 7). The impact on the host economy however, is not always the same because they are subjected to various factors such as level of development and availability of resources. New technologies play a significant and growing role in the modern world, particularly when it comes to economic growth. Current changes in technology that take place in developed countries are the future foundation for new industries unheard of even a decade ago. The changes are reflected also by societies and economies of developed countries that in the past had been called "consumptionist" and in the near future might be called "knowledge-based economies" (Sumlicka, 2002, p. 85). Economies of some small countries and less–industrialized regions are increasingly trying to attract knowledge-based FDI and to participate in the global chain of

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production. In this light, technological and financial factors of FDI that have been described by economic theories could provide a glimpse of the future forces that shape the world. This article presents a review of popular FDI theories in the light of the complex issues of the knowledge-based economy.

Selected theories of FDI

The primary aim of FDI theory is to explain motives for investing capital in a foreign country. However they also aim at identifying motives and factors that influence, for instance, the location decision of the particular investment. Most of the existing theories however tend to focus on one main aspect of the FDI process, describing and explaining it from the perspective of the chosen factor. The exception comes from the eclectic theories that bind together selected qualities of theories established previously (Przybylska, 2005, p. 77). Traditionally, FDI theories could be separated from a micro– and macroeconomic perspective. Both perspectives do not always explain particular factors in the same fashion but this could be due to the nature of the conducted research and data analysis (Budnikowski, 2006, p. 145). Microeconomic theories, perhaps because consensus is easier to find (Snowdon, 1998, p. 13,) are considered to be more progressive. Moreover, a common ground for microeconomic theories of FDI is that they refer to the theory of business enterprise and market structure (Rymarczyk, 2004, p. 36). Among popular microeconomic theories there are: the ownership advantages theories, theories of FDI localization, Vernon's product lifecycle theory, theories of internalization, and the eclectic theory of international production. Macroeconomic perspective of FDI is focused mainly on the subjects of optimal currencies, theories of direct investment position on the foreign markets, and theories of relative changes in labor and capital.

The monopolistic advantages theory was formulated by S. Hymer in 1960 (published in 1976)[3]. The theory is considered one of the most popular microeconomic theories of FDI. It states that a company makes a decision on foreign investment when production located in the foreign country is worth more than export of goods, or issuing new production abroad is more profitable than selling a license to foreign companies. Also a company which has a competitive advantage in terms of operational finance or technical knowledge, management and/or marketing advantages in the host country allow it to successfully shift business abroad. Lastly, it is done when costs related to sensitive activities compensate new production on the foreign markets, ergo when a foreign investor keeps a "monopoly" on potential advantages resulting from market imperfection. This means that, hypothetically, where foreign markets would have been perfect a higher cost of conducting business abroad would make it uncompetitive for a company to operate among firms that are already operating on the target market, and this in return would level all economic advantages to shift business abroad.

Advantages or benefits for companies which invest are related to product differentiation resulting from R&D and marketing developments, know-how (patents), protectionism of governments attracting FDI policy, or customs (contingents, taxes etc), and/or efficient cost-management skills. A company that enters a foreign market could benefit from a lower cost effect, by taking advantage of mass production and by benefiting from subsequent phases of the product life cycle.

Another group of microeconomic theories undertake the issues related to FDI allocation defined by economic and political factors specific for the host country. Factors are defined for regions receiving FDIs and that can be observed also for other specific groups of regions (Dunning, 1991, p. 117-136).

[3] Also in the works of S. Caves from 1982.

Location theory, created by J. H. Dunning, A. M. Rugman and P. Tesch, similarly to ownership advantages theories, condition FDIs by specific advantages. Those advantages differ from each other, some belong to enterprises and some to the country of allocation. Location theories concentrate on finding factors that determine a favorable investment climate and business environment. Most importantly, however, factors are often categorized into four groups in relation to: a) institutional and political factors that create the so called investment climate in a given country of location of the investment,[4] b) cost factors, that refer to overall accessibility of production factors and costs of those factors[5], c) market factors: how big and dynamic the market is, competitiveness, external protection on the market, phases of its development, export possibilities, and product life cycle available on the market, d) trade barriers: custom procedures and customs, custom restrictions and other limitations, contingents, norms, subsidies for local rivals, etc. Logistic and infrastructure issues, and the local consumer attitude, are also listed among barriers (Rymarczyk, 2004, p. 41). The weight of particular factors is subjected to the goals of the FDI, and obviously those factors can be motivating or discouraging (Rymarczyk, 2004, p. 24). The internalization theory (Buckley and Casson, 1976, p. 8) relates to transaction costs. It describes additional factor that motivate an MNE to invest in the foreign economy related to avoidance of additional costs of market transactions (Rymarczyk, 2004, p. 24). Enterprises that are going through the process of internalization create the internal market when costs grow to the level at which it is more profitable to operate within the boundaries of its own hierarchies, acting (at the same time) in the role of buyer and seller. In this situation, outside-market transactions are substituted by the internal market of the MNE.

The creation in the internal market is made *inter alia* by applying so-called vertical integration – shifting one's own suppliers and customers to the foreign markets. This is related to the additional costs of opening new operations in the foreign environment.

The authors of internalization theory emphasize also another fact that sets the internalization of the enterprise in motion – the objective of monopolizing knowledge and know-how. The primary competitive advantage of most enterprises is: innovativeness and know-how on how to use new technologies. As a consequence, the boards of MNEs are more keen to penetrate foreign markets using FDIs instead of selling a license or trading. It gives them a possibility to keep the technology and know-how within the boundaries of the corporation. Controlled licensing does not give a sufficient protection against losing the know-how, but on the contrary could cause the owner to lose a monopoly on technical knowledge, and thus imbalance the competitive advantage from the MNE perspective.

Keeping know–how within the firm is usually more profitable than selling it to foreign companies. (Misala, 2005, p. 118). However, internalization (in its core) does not mean that a firm has to be separated from the market completely. It is more likely that only some of the sensitive intersections of company operations and market are shifted and covered by the so-called internal MNE market.

It is most likely that internalization processes are stimulated by globalizing and networking tendencies throughout the world. On the one hand, internalization of firms lowers the costs of operations for MNEs by providing lower production and service costs, which in further consequence stimulates demand and has a positive impact on competitiveness. On the other hand, internalization makes enterprises grow significantly in the geographic sense.

[4] The basis for specific legal regulations could be traced back to specific fiscal policies, economic stability, legal security and social attitudes towards FDIs.

[5] For example, low salary levels in developing countries is a justification for shifting production.

The eclectic theory is probably one of the most popular and appreciated theories of FDI. According to Dunning, who introduced it first, the best description of FDI could be achieved by a complex approach to factors that motivate investors to initiate investments, and this by comparative analysis of three theories: monopolistic advantage theories (that focuses on explaining causes of FDI, but does not explain why investors choose a particular country), internalization theories (addressing the mechanisms multinational firms use to get a specific advantage on the market), and location theories (Dunning, 2000, p. 11).

The main assumption of the eclectic theory is: existence of three primary conditions, motivating MNEs to invest on a foreign market: ownership advantages, location advantages, internalization advantages. Those conditions create the famous OLI paradigm.

According to the eclectic theory, MNEs must gain an advantage over enterprises from the local market. This advantage comes from specific and sometimes monopolistic actions performed by the corporation. To meet the second condition of the OLI paradigm, an enterprise should use the current advantages of the location. Licensing would thus imbalance or destroy competitive advantages held by the MNE. Assuming that the first two of the conditions are fulfilled, the relative internalization advantages part of the paradigm must be fulfilled as well. Otherwise, it would not be necessary to initiate FDI, and business on the foreign markets could be achieved via exports. Occurrence of the high level specific advantages leads MNEs to increase internalization activities, and existence of specific location advantages that influence profitability of operations on foreign markets motivate corporations to undertake international production. The eclectic FDI paradigm combines various factors influencing decisions of the enterprise in the scope of direct investment, ergo it makes a synthesis of the principal framework of internalization of enterprises and explains them in a more complex way.

Among the group of microeconomic theories explaining the multinational flow of capital there is also Vernon's (1966) product life cycle theory. This theory has its roots in the research on international trade and also tries to explain factors that determine FDI. It divides product life cycle into three main parts: introduction of a new product on the market, maturation of the product, and standardization (Rymarczyk, 2004, p. 44).

The first phase occurs when the product is produced in the home country (it is a small scale production, on the local and country–level scale). After that there is a maturity phase that consists of the unification of production technology and mass scale production. This stage forms the internal and the external market. Flows of capital are directed from the home country to host countries. After some period of time the processes are standardized and demand for the product on the foreign markets increases. This creates a strong stimulus for competition and thus causes production to shift to developed countries and then to developing countries and so on. In the last life cycle phase, production in the home country decreases in favor of the comparative advantage displayed by developing countries. The home country starts to import the good from abroad.

Later Vernon widened general assumptions of his theory with elements known from industry organization theories and location theories. Each of the phases of the product life cycle are characterized by different oligopoly behavior in different phases of evolution of the particular branch of production. The first phase was characterized by oligopoly that was innovative. The enterprise that introduced new product on the market was protected from competitors by a barrier of innovation. The second phase was characterized by the presence of a mature oligopoly. The enterprise developing the product meets its competitors trying to imitate the product and sometimes strategies of the FDI as well. Competitiveness is maintained by production of scale

and volume of sales of a particular product. In the last phase (standardization) the oligopoly has a declining nature. Barriers that have been mentioned above are overcome by other firms, and production is shifted to places where the cost is relatively low. All of the aspects of Vernon's life cycle theory were analyzed empirically and whereas from the side of foreign trade the outcomes were positive, in the scope of FDI, there were some diversities.

The macroeconomic field of FDI research comes directly from the research on foreign trade. Among popular macroeconomic theories involved with and related to FDI there are: currency area theories particularly researching formation of the investment position in foreign markets, and theories of relative changes in costs of labor and capital. The first group of theories focuses on the currency level that might be interpreted as the location factor of FDI. This means that FDIs are a result of different currency and custom zones – primary factors that describe why MNEs decide to expand abroad. Location of operations is subjected to two primary factors: level of currency exchange and customs or tariffs in the host country (Latocha, 2002, p. 78). Foreign investments are thus a result of a difference in currency strength on the international currency exchange market.

According to Alibera (1971) every enterprise has its own defined assets and holds them in various currencies, some stronger and some weaker. Investors, before considering investment decisions, analyze those differences, taking into account (existing in all countries) levels of investment risk of FDI initiation (Misala, 1990, p. 223). Investments are then made after examination of a currency position of the host country, usually weaker and less stable than in the home country. The calculation is made in the currency of the investing country, considering the degree of exchange rate risk, political risks and so on. It explains why streams of FDIs are flowing from countries that have stronger currency to countries with a weaker currency exchange rate. Strong currency of a country of origin makes also assets on the local host country market capitalized according to a higher rate than local–company assets. (Misala, 2005, p. 110).

J. H. Dunning's evolution theory of a country's investment position in the world's financial markets focuses on location of FDIs in the scope of investment decision–making given the differences of economic development of host countries. According to this theory, relationships are subjected to the investment attractiveness of the country (measured by net value of FDI per capita) and the level of economic development (size of national income per capita) (Latocha, 2002, p. 78). Dunning divides countries into three groups according to the level of development and investment attractiveness. The first group includes countries that have a low level of income per capita. They do not invest abroad and they are not attractive enough as potential host countries. The second group consist of countries with the average level of income per capita, and in consequence with increasing levels of FDIs inflows. At the same time their investment activity in the foreign markets is marginal: companies from these countries invest to a very limited extent. The remaining group consists of countries that are characterized by higher income and high level of capital investments on the foreign markets. In countries with the highest level of economic welfare the overall value of capital invested abroad is greater than inflow of foreign investments. Countries included in the fourth group have attractive investment climates and are among developed countries with a high level of income *per capita;* most of the FDIs in those countries are concentrated in branches with advanced technology and know-how.

A different approach is presented by K. Kojima's (1973) theory of relative changes in labor costs and capital. According to this theory, FDIs could be distinguished by two stages: first, when monopolistic and oligopolistic advantages of MNEs are traceable in the micro scale and a second stage when investments are a result of the shifting position of a country in terms of

comparative advantages gained on two productivity factors: labor and capital (with scientific and technical knowledge included) (Misala, 1990, p. 225).
According to Kojima, shifts in production abroad are subjected to the difference in costs of labor and capital. Labor costs are primarily high in developed countries, which creates an incentive to shift production to developing countries with low costs of labor and a relative ease of exploring new financial possibilities. Empirical studies of Kojima's theory proved that it explains the behavior of all kinds of FDI segments, except relations between countries with significant differences in the level of economic development.

Incentives that determine knowledge-intensive FDIs

Perhaps because of a countless number of factors that determine FDIs, economic literature on the subject is filled with differing opinions on the matter of incentives MNEs are taking into account when investing abroad. For some, a primary driving force is to maximize rates of return in the long term, for others a strict concentration on evolutionary growth and survival of the firm. To be precise, the above-mentioned factors are the two sides of the spectrum and it is most likely that opinions on a particular side might come from differences in the methodology of the research undertaken to prove the theory.
FDIs are complex. There might be cases when they are not subjected to only one generic incentive, but to all range of different motives and factors. However, most MNEs investing abroad usually expect to achieve greater profits in the future. The enterprise that decides to start an international operation is driven by the same motives as local level enterprises, the difference comes from the fact that it does not only focus on one country but on the environments of other countries as well.
There might be a case where microeconomic incentives lead to very specific but unexpected macroeconomic behavior. Incentives for internalization could be grouped from the point to view of several criterions such as: market criteria, cost criteria, plus institutional and ecological criteria. Entering new markets and operating on a foreign market is also one of the main motives for foreign investment. However, the greater the potential market the greater the tendency and "need" to initiate new investments (Gorynia, 2000, p. 133). Current knowledge determinates of the FDI entry are described by the stage of a home market (e.g. the stagnation), demand on the home market, capacity utilization of the enterprise, growth rate of the foreign economy in relation to the home economy, competition on the home market, trade barriers, bilateral agreements, etc.
Trade barriers and bilateral agreements are strongly influential for the FDI, even if the market does not have a prior history of FDI and there is a clear visible niche for the investment.
An extra incentive that could influence the decision comes also from the willingness to outrun competition and to maintain or achieve a leading position in the market. In the case of FDI however, there might be also present a strong phenomenon described as "the mimic effect". This effect is visible when enterprises are trying to copy good practices from each other and implement them in their own operations. Small businesses also do this, but MNEs take the matter more seriously. It is because they understand that to stay alive they have to learn from the competition and improve to gain additional advantage.
FDIs are subjected to the costs of labor (naturally, the lower, the better), costs of resources, intermediate goods, etc., fixed costs, taxes, credit costs and other operational costs. From the institutional side they are also determined by: existing government regulations, political conditions, government policy to attract FDIs, and local community attitudes towards FDIs. For some MNEs

ecological motives are strongly considered (usually for MNEs that are securing delicate foreign resources). This is because lower demands, in relation to other countries, for environmental protection which are stricter for developed countries could also be an incentive to shift production abroad. MNEs do this not because they want to exploit the natural environment of undeveloped countries. On the contrary they understand the need to protect fauna and flora in the world. They simply try to avoid costs that are related to technology of production adjustment to environmentally friendly regulations. Eventually they have to do it, though R&D activities tend to focus on cost–optimization of production technology and protecting the environment at the same time.

Economies shifting capital in the form of FDI can expect not only benefits but also risks, depending on the time perspective. For instance, there is the impact FDIs have on country's balance of payments. To finance branches and operations abroad, it is necessary to transfer financial resources from one country to another. One way to do it is by purchasing parts or an entire foreign company or by a purchase of land for construction – mergers, acquisitions, brownfield and greenfield investments. In the short term investments and financial transfers make the balance of payments seem unfavorable. However in the long term, they usually have a positive effect on the economy – reflected by the balance of payments. It is because the branches and enterprises that have been created make a profit. Then, if some of the generated profit is relocated back to the home country, it improves the balance of payments. Plus there is also a benefit to having cheaper products coming from host countries at home, apart from the fact that the stream of money might be stable.

One of the main aspects concerning the economic impact of FDIs is how they influence the job market, although it could be difficult to measure this directly. The situation may also differ for a host and home country depending on investment decisions. For a home country it could affect changes on the job market if the transferred capital was not a surplus. For the host country, depending on the technology, jobs can be created but in the long term there might be a negative effect on local businesses. Whatever the spillover effects for the local economy is, from a home country perspective there are again two possibilities. One, the capital is moved abroad, and it does not stay in the country because of the potential profits on the foreign markets. This could have a negative effect on the job market as the affiliates of the enterprise that could employ on the domestic market concentrate abroad. Moreover, if the transferred capital is a surplus of accumulated capital, the situation described above does not influence the unemployment rate.

Another impact of FDI is related to export. Usually at the first phase of starting new affiliates abroad, production in the home country increases. This phenomenon is caused by parts of equipment being shifted abroad. In the long term perspective however this FDI effect could negatively influence the export and the job market. If already operational branches start production, it could push back other earlier production from the market and thus impact the economy of the country of investment origin. It lowers the value of exports as well as production and unbalances the job market. This could be avoided if a home country continues to implement the strategy of perpetual development at home.

Host countries observe a positive impact of FDIs in terms of production and export. They become new points of origin for the products. A typical example is described by a carmaker opening a factory in a country – with trade restrictions – cut off from car production there before. In consequence, intermediates have to shift parts to a new location as well. This makes the host country export grow, as well as production and employment.

Developing countries usually need additional financing to grow more rapidly if they want to achieve the same standard of living as developed countries. Because of that, FDIs are very beneficial for

them (Guimón, 2011). FDIs are a sufficient way to strengthen investment funds, ergo improving economic activity. For developing countries FDI could also be a chance to improve the balance of payments over the short-term. Plus, FDI could transfer technology from one country to another. Positive consequences of technology transfer could be, however, untapped by developing countries because of a low level of education. This occurs when a particular technology is too modern and thus could not directly influence the industries of a host country. The spillover effects of FDIs are then extremely limited. Positive macroeconomic effects (on production and employment) could fluctuate, when the main goal of the FDI is to enter a foreign market, without the willingness to modernize production. Incentives for this kind of behavior among MNEs is related to willingness to outrun foreign competition, and they generate a negative opinion in some societies on FDI.

In the case of developed countries, advantages coming from FDI have a slightly different character. Similarly to developing countries they could be a source of technology transfer, but they are usually perceived as a supplement to the existing technical knowledge base.

For some developed countries FDIs are often used as a source of financing regional development, for regions which are relatively undeveloped economically. Those countries also try to attract FDI. For example, Germany is known for its policy on attracting FDI in the former GDR area. Knowledge intensive FDI is defined as "an investment involving a lasting interest and control by a resident entity in one economy in an enterprise resident in another economy for the purpose of developing R&D activieties" (Guimón, 2011, p. 2). This is a very heterogeneous phenomenon, and should be understood as a wider process strengthening the national processes of innovation. FDIs are expected to bring significant benefits to host countries by upgrading national innovation systems especially in the case of smaller countries, as they give them a chance to participate in the global chains of production and the network of R&D activities (Guimón, 2011).

FDI could contribute to normalization of a market situation, if FDI is localized in the branches that are dominated by one or several national enterprises. In most cases a new player on the market shakes up monopolization practices within the industry. This could although create fears if MNEs are better than local players. Then again, fear of foreign domination comes from a person's own experiences and opinions. These might be irrational, but there is a bit of truth in it. For instance, developing countries rich in resources fear MNEs could pressure the long term government strategy towards resources. In fact, however, the country that welcomes FDI on its territory has a significant freedom to regulate general terms and conditions of foreign operations. Using proper legislation it could block all business actions if they think it is necessary to protect national interests. They could protect national interests by excluding the possibility to acquire control over national strategic enterprises, or introduce fees (for instance for natural resources use). At the same time though, use of this kind of constraint could in practice discourage foreign investors from further FDI, especially if other factors, like size of the market, geographical factors, natural resources, and overall state of the economy are not balancing constraints imposed by governments (Budnikowski, 2006, p. 147).

FDI tendencies and transfer of technology

FDI flows depend on various factors, they fluctuate in the rhythm of world business cycles with irregular geographic distribution. During 2009–2010, inflows to developing economies have been increasing faster than in the rest of the world because of the relatively fast economic recovery and the strength of host markets, and lastly the growing influence of south–south

relationships. Also, the number of international mergers and acquisitions doubled in developing economies because of the attractive evaluation of local companies' assets, stable growth of earnings and solid economic foundations (UNCTAD, 2011, p. 3).

Most governments treat MNEs as a main engine in shaping national systems of innovation. It gradually makes them compete for R&D intensive FDIs (Guimon, 2008, p. 2). FDI are used to finance various types of economic activities, using a wide range of instruments. There are a number of factors involved in stimulating or dissimulating FDI processes related to the profile of activities of the enterprise (UNCTAD, 2011, p. 21). An important role in socio-economic growth is played by capital and technology, influential factors for the institutional environment of the country. Those activities encourage the creation of new economic space, that could use suitable technical knowledge, industry demand, market principles and suitable social rules for business (Tiits, 2007, p. 328). This happens if between FDI flows, levels of technical development and economic growth there is a system-based feedback loop. It means, that FDI are not only "a simple way" to transfer capital but they could carry much more potential by, for example, generating socio-economic changes and providing a transfer of technology. These changes could influence the fragile balance in the social spectrum, although from the economic point of view in the long term they are treated (at present) as positive.

According to the comparative advantages theory of D. Ricardo, differences in productivity are attributed to economic environments. Foreign trade is subjected to the level of specialization of economies resulting from differences in productivity of a particular good (Tiits, 2007, p. 325). Lower productivity creates a specific gap, that is filled by FDIs, which is confirmed by the amount of inflows to developing countries increasing with a simultaneous high level of internal investment. This means that FDIs could play an important role in promoting economic growth as well as in promoting sustainable development. Thus, they can stimulate a process of balancing global world development. Furthermore they could be perceived as an additional injection of funds and technology to the industry of the region. FDIs influence economies and their competitiveness, and they can generate employment and reduce social and earning inequalities (UNCTAD, 2011, p. 21). Active FDI policy can stimulate economies better than protective policy towards existing national leaders.

Long term economic growth takes place in waves (cyclically), and transfer of economic activities is subjected to the global distribution of knowledge and technology. In developed economies competitiveness on the market is based on the dynamism of comparative advantages. The atrophy of relative costs of economic advantage, with a low level of knowledge and technical intensity have to be replaced by rising standards of living (Tiits 2007, p. 326). This means that there must be a natural push and pull effect to shift knowledge intensive activities to developing countries. Host economies could thus benefit from the rising attractiveness of developing countries by easy–access policy towards FDI. During a global economic crisis – since 2008, a number of companies performed strategic restructuring to maintain profitability (UNCTAD, 2011, p. 25), this meant cuts in home economic operations during shifts and openings of branches abroad. The motive was to use comparative advantages resulting from the new location (UNCTAD, 2011, p. 25). MNEs are increasing the levels of investments only in countries where they can maintain effectiveness and competitiveness in the global value chains.

Investment flows to those countries where cost effectiveness and competitiveness could be maintained in the frames of a global production chain. This could mean that the period of any strong recession could influence the dynamism of changes in FDIs (UNCTAD, 2011, p. 3-4). Perhaps this is because it gives an additional incentive to create better technical solutions, and

in other words stimulates innovativeness. FDIs are thus far more dynamic in developing countries and in-transition economies, because of the opportunities and unexplored initiatives.
FDIs can be fast. Better, when it comes to elasticity there are only *portfolio* investments and investments classified as commercial or bank loans. Authors of the UNCTAD report from 2011 (UNCTAD, 2011, p. 30), conclude in that there might be also a mechanism of evolution to FDI composites. In other words, the composition of FDI is changing. For example, the change involves a shift from capital components to debt capital. It is not certain how this will affect the stability of FDI in relation to other types of capital investment in the long term. FDI could be perceived as 'short-term liquid flows of fast money'. Stabilization of the capital flows could be represented by important changes in some countries (UNCTAD, 2011, p. 22). Taking into account the globalizing economy of the world and the dynamics of changes in technology (developments in biotechnology, IT or machine learning) it could happen that FDIs will adapt to changes and change its composition accordingly.
After the sharp recession from the end of 2008 and the beginning of 2009, the economic environment in 2010-2011 changed for the better. Increased growth of production was subjected to multiple factors, like stabilization of financial systems, resilient growth on the global markets, introduction of government support that stimulated recovery in developing countries and stimulated marginal demand. After the recession of FDI, world demand for private investments is improving, what in consequence saved the global economy from the long effects of depression. During a period of instability and high level of public deficit on the national and regional level and with the nervousness of capital markets, governments have to stop the deficit and allow private investors to take a primary role in generating and supporting a return to sustainable economic growth (UNCTAD, 2011, p. 20). Improvement of the global macroeconomic situation influences directly enterprises' ability to invest (UNCTAD, 2011, p. 16).
Distribution of FDI inflows throughout the world in the geographical context is very uneven. A deep integration in the global production network, that goes beyond the traditionally perceived international trade, is still restricted to a relatively small number of countries, despite the ongoing trend in market liberalization and significant reductions to trade barriers. However, a growing number of governments is aware that taking part in global production chains has a positive effect on the economy. This was well exploited by Asian countries like South Korea, Taiwan, Singapore, China, Malaysia, Thailand and India.
A growing number of FDIs specializing in knowledge–intensive production is being attracted by countries from the EU structures and in countries from Latin America (Tiits, 2007, p. 331). In the past, however, FDIs have been associated with some uncertainties or fears – sometimes those uncertainties are still present in the developing countries. In the 1980s they were visible also in the US. They were related to Japanese investments in the car industry and in the microelectronics market. Nowadays similar fears can be found for instance in Germany, regarding Chinese low- and high-tech enterprises investing in Western Europe (Tiits, 2007, p. 325). Experiences from the past demonstrate that FDIs could play a positive and also a negative role in the process of stimulation of economic growth. This is related to the ability of the host country to benefit from the MNEs' presence in the market (Tiits, 2007, p. 325). It is possible that this might be related to the popularization in the 1950s of the dependency theory, which stated that a significant group of MNE investments had been associated with a risk for the host country. FDIs were in fact perceived as a new form of colonialism and exploitation (Tiits, 2007, p. 324). The advantage of the MNEs on the world markets comes from the ability to control natural resources, in the key areas of future product development and future production processes.

Increasing flow of FDIs to developing countries is closely connected with some regional differences in distribution. In some poorer countries FDIs are still dropping (UNCTAD, 2011, p. 4). Outflow of investments from Eastern Asia is a consequence of a protectionism by governments in time of recession (UNCTAD, 2011, p. 7). However, it might be possible that it is a consequence of the educational needs for some countries in order to prepare them to receive knowledge intensive investments. Production chains in the world have a tendency to globalize. Countries that had concentrated in the past around the mining industry will have to restructure their economies in a way that will fit to knowledge-intensive world tendencies. A growing number of researchers observe a growing phenomenon of the willingness to attract FDIs that are highly intensive in R&D activities. Those enterprises could be a lever for international technology transfer. They allow the growth of organized knowledge intensive clusters in the host countries, thus their inclusion with the international chains of production (Guimon, 2008, p. 7). Because of that, FDIs and foreign research institutions are perceived as the catalyst of change. They become now a catalyst of innovation and an engine of increasing competitiveness on the global foreign markets. However, above all their primary role is that they offer a possibility to participate in the global economy production activities.

FDIs are historically related not just with knowledge-intensive activities, in fact the trend is quite new; traditionally they were focused on peripheral activities when it comes to innovativeness. The investment activity of 100 of the largest MNEs in the world is focused mainly on the production shifts from developing countries to transforming economies. This kind of behavior could be interpreted as a transfer of technology, but not innovation and knowledge–intensive transfer as economies might not be prepared to receive state-of-the-art research institutions.

Drawing a comparison between greenfield investments in 2007-2008 and 2009-2010, the number of the projects that had been implemented in developing and transition economies increased more than 23% (UNCTAD, 2011, p. 26). This phenomenon is visible in the case of smaller countries, that have problems in the spectrum of low-tech on the world market dominated by the Asian Tigers. This forces smaller countries to seek the possibility of export and to produce more rapidly than in the case of bigger countries (Tiits, 2007, p. 328). It stimulates innovation. Recession meets up with investors drawing back from south, east and south-eastern Asia and Latin America (UNCTAD, 2011, p. 6-7). All larger outflows of investment from Latin America – Brazil, Chile, Columbia and Mexico accrued in a time of economic growth. Those countries started to increase acquisitions abroad, especially in the developing countries where investment possibilities increased right after the time of recession (UNCTAD, 2011, p. 7). At the same time a lot of MNEs invested in developing countries to improve their financial situation (UNCTAD, 2011, p. 7). This could be interpreted as a high economic level among the countries of Eastern Asia and Latin America compared to the rest of the world, or the existence of other perhaps political factors, that are reflected by behavior of investors in the world.

The flow of capital makes economies that are in the process of transformation and developing economies unstable. The environment of low interest rates in the developing economies could not be maintained for the long term. FDIs that have been a main flow of capital in 2009-2010, could give them greater stability and improvement in the context of long-term investment planning (UNCTAD, 2011, p. 21). R. Solow has described how about half of real economic growth could be classified as "other reasons", that were beyond a standard explanation of the economic theories. A component that was outside the classic force explaining the phenomenon was technological growth (Tiits, 2007, p. 326).

Smaller countries are forced to assimilate new technologies streaming out from bigger and more advanced countries. Therefore they are not interested in being a leader of the new knowledge-intensive branches of the industry. It is important to be sure that being a host country, they might take part in the global chain of production in the bigger knowledge-intensive cluster that intensifies the knowledge and technology of the world. Those countries can also fill the niche made by the need for constant improvement of businesses related not only to advanced technologies but also to traditional businesses. Other small countries (with a high standard of living) like Holland or Switzerland have placed themselves as a location of of MNEs headquarters. However, most of them are located in Sweden (Titts, 2007, p. 329). Enterprise activities in the area of R&D are still located in close proximity of the headquarters of the most developed countries, and a diversification trend is a new phenomenon (Guimon, 2008, p. 2).

During stable growth in the home economies often equipped in aid packages, MNEs had to struggle with scheduled earlier long term internalization strategies. It is possible that this was a main reason why MNEs continued their strategies to enter new markets (UNCTAD, 2011, p. 25-26) despite financial problems.

Those FDI investments that are made as a result of mergers or acquisitions in some cases might be treated as a mutual protection against losing technical advantage. It is because there is a risk that the end parts of the production chain could reduce the mandate of the branch to duplication of the existing parts of the chain. Normally, governments are not interested in promoting this type of FDI in the case of R&D, because they want to protect their country leaders (Guimon, 2008, p. 2). But this often reduces the possibility to enter the global production chain. Along with the improving macroeconomic situation, the MNEs in the future will continue to reflect the global investment climate, which means that they will be sensitive to government policies. The role of technology and knowledge in the economy will increase, creating a feedback loop between government strategies to attract FDIs and knowledge-intensive activities of MNEs.

Conclusions

FDI flow is subjected to and reflected by a large number of factors. These change and fluctuate according to global political and social changes and are subjected to new waves of continuing technical revolution. The FDI role shifts to fuel global technical innovation. In the near future the strength of interaction between several groups of technologies (like information technology or biotechnology), will shape the development of civilization (Sumlicka, p. 85). Because of the growing role of knowledge in economic growth this new type of economy is often called the knowledge economy or knowledge-based economy (Sumlicka, p. 85).

The common point for theoretical descriptions and observable facts in the FDI spectrum is the existence of technical advantages and a phenomenon of stimulus for innovation. This means that if between two countries there is an FDI interaction, there must be a knowledge transfer between them, which in consequence could equalize the level of the world's technical growth in the long term. The existence of FDIs and their acceptance among communities and governments of hosting countries means a deepening of globalization and mutual relationships in the global economy. Globalization will be by economic and not political activity.

The knowledge on FDIs and MNEs transfer incentives have been based on historical data analysis but they also describe current economic trends. They can also influence the way we will perceive FDIs in the future. For example, the application of the dependency theory in the 1950s resulted in a different, milder view of FDI by the host countries. Current tendencies in FDI

theories in the context of the knowledge intensity of economy tend to focus on the global chains of production. It might be because nowadays there is a growing number of smaller countries participating actively in the process of international trade, benefiting from favorable conditions created by international trade regulations.

Rapid development of new technologies, particularly the development of communication technologies, influences socio-economic dynamics. A new wave of ideas forming from knowledge-based communitiy interactions is reflected by the evolution of the FDI structures. There is a growing number of knowledge-intensive international clusters, that despite vast geographical distances operate on the same production chain, creating global production chains. It is thus possible that these tendencies will grow in the future.

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