The influence of globalization on market structure and competitive advantage of selected economies

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Abstract

The process of globalization which is conditional on the development of modern technologies, particularly information and communication technologies, is not only connected with the ongoing process of internationalization of the world economy, but also with the process of transnationalization leading up to the state of interdependence of individual economies.

Foreign Direct Investment (FDI) is an important factor of transnationalization which needs to be considered from two different angles: firstly from the recipient of investment (host economy), and then from the investment provider (investing economy). FDI represents the way of allocation provider's capital which is connected with other sources for wealth creation of the host economy.

The aim of this article is to show signs of transnationalization in integration of European countries on the one hand and on the other hand Japan as a highly developed and traditionally open economy which is not integrated in any groups.

The comparison uses Inward FDI Performance Index and Outward FDI Performance Index. The proportion of FDI on gross fixed capital formation of the evaluated countries is also used as an indicator of level of participation in transnationalization.

Image analysis method helps to describe the influences acting on the change in market structure of the countries – recipients of FDI. Ratings are based on uniform methodology in terms of advantages and disadvantages related to the competitiveness of the relevant countries.

Results of the research include evaluation of the countries as providers and recipients of FDI, both with regard to their share of global economic wealth creation, and comparison with the total investment of a particular country. There is presented an idea to eliminate negative effects of imperfect competition as a tool for increasing efficiency of capital allocation (changes in market structure due to transnationalization). There are also presented barriers to building competitive advantage of monitored countries based on so-called soft factors.

Key words: Transnationalization, Foreign Direct Investment (FDI), market structure, soft growth factors

JEL Classification: F21 F23 F43 O33 R11

1 Introduction

Globalization is often presented as an economic phenomenon in these days and it is connected with the reality of the turn of the millennium. The bases of the fact, which is called globalization nowadays, are however processes which have been running since a long time ago.

The economic aspect of globalization is linked to increasing size of the market which significantly affects the economic performance. *"As there is an ability to "exchange" thanks*

to labour division, so the extent of this division is necessarily limited by the extent of the market." [1, s. 19] Enlarging market extends soon beyond the "national economic borders" and the international business represents the principle element of all internationalization processes. Economic internationalization and transnationalization is the principle of globalization of the world economy. It means that there is much more global competition and it should support the economic efficiency.

In highly developed economies, transnationalization proceeds from monopolization to transnationalization and economic integration, which is at first local, later continental and then global. Nevertheless, global integration is a specific option of economic globalization, which is created on the institutional basis. There are processes which represent new types of globalization and they proceed in two different ways: evolution (spontaneous way of globalization) "globalization from below" and intentional institutional influence of globalization so-called "globalization from above". [2]

Monopolization as well as transnationalization and integration come from the selection of producers in the market. While the basis of monopolization is made by isolation of markets, the basis of integration is liquidation of this isolation. Current global processes create from the global economy a new interdependent global economic system where no subsystem can perpetually develop and harm the others. Partial impacts of apparently distant arrangements have come to attention of economists because: *„economics is the study of observational consequences likewise logic and mathematics is the study of recognition of inevitable implication …*"[3, s. 184]

The economic growth is not only given by the amount of physical and human capital but also level of technologies which is an indispensable platform in development of globalized economy. [4] Transnationalization of the world economy, which is implemented by Foreign Direct Investment (FDI), has an important impact on host and investing economies, resp. on particular regions. Objects of investigation are becoming market structures, growth factors (considered to be traditional factors) [5] but there also is an increase in so-called soft factors with significant differences among the countries. [6], [7], [8].

The aim of this article is to show signs of transnationalization of two entities

- EU 27 – significant degree of integrated European economies
- and Japan, very developed and traditionally open economy but not incorporated in any group

and determinate the main factors of the economic growth and its barriers. Attention is paid to differences between these two entities, differences in growth factors, resp. barriers to economic growth.

Table 1 demonstrates basic characteristics of market size of both entities as a share of world values.

Table 1 – The comparison of EU-27 and Japan and their share of the world values

Indicator	World	% EU 27	% EU 15	% EU 12	% Japan
Area (2000)	**135 641 00 km^2**	**3,19**	**2,39**	**0,80**	**0,28**
Mid-year population (1 July 2001)	**6 134 number of person (mil.)**	**7,85**	**6,16**	**1,69**	**2,07**

Source: own elaboration according to [9]

Note: EU 15 consist of 15 traditional members countries of the EU, EU 12 means 10 new countries since 2004 and 2 countries since 2007.

It is evident from Table 1 that EU 27 covers an area 11 times bigger than Japan but in the amount of population EU 27 does not exceed Japan not even 4 times.

Comparison of degree of involving into global processes comes out from the description of degree development of relevant technologies and the extent of their support. To capture the method and extent of transnationalization of both economies, there have been used data of Foreign Direct Investment development and condition from 1990 to 2007, their efficiency and potential as well as there has been considered the share of total investment of the country measured by gross fixed capital formation. [10]
Difference in consequences of monopolization and integration on the degree of market isolation and the degree of competition development is analyzed by a graphical method. Indexes of transnationalization and internationalization are used for the assessment of the degree of development similarity of transnational market structure. The competitiveness of EU 27 and Japan is analysed by using selected components of Global Competitiveness Index (GCI) [12]. Classification of particular countries is made in accordance with the methodology GCI and there are compared major competitive advantages and major barriers in economic growth.
The comparative analysis can help to solve partial problems in regional economies by application of analogy method. It also is useful for preparation of institutional pro-growth policies.

2 Background and manifestations of economic globalization

New technologies are the background of all processes and they lead to spontaneous globalization. The interconnection between entities in the world economy would not be possible without them.

2.1 TIT - Technological Platform for Globalization

The greatest economic boom of internationalization in the world has been noticed since 1950s when the first corporations and integration groups were established.
It also was a period of time of particularly dynamic technical and technological progress which was affecting many sectors. The cause and the platform of globalization is the technological progress but not „general“. Creation and development of technologies enables quantitative (territorial, commodity) and qualitative (integration efficiency) markets' growth. Especially, it is a technological progress in Transportation sector, Informatics and Telecommunication (further just „TIT“). Particularly these three sectors represent the dominant platform for the development of exchange of material and non-material values, markets' development and above all mobility of production factors aimed to maximizing economic efficiency of their integration. The modern technology TIT can be marked as a technological base of concept and development of interdependent global economy.
4 indicators are used for comparison of technology levels in EU countries and Japan: absorption capacity of new technology by companies in particular countries (measured on scale from: 1 = absence of the absorption capacity; to 7 = aggressive absorption), the number of main telephone stations per 100 inhabitants, the number of mobile phones subscribers per 100 inhabitants (including their sum) and the number of Internet users per 100 inhabitants. The countries of the EU are compared by the average number for the EU 27 and in divisions of the EU 15 (traditional countries) and the EU 12 (new members). The results are in Table 2.

Table 2 – Comparison of the EU 27 and Japan in terms of technology infrastructure

	firm level technology absorption	main telephone lines per 100 inhabitants	mobile telephone subscribers per 100 inhabitants	sum of main and mobile phones	Internet users per 100 inhabitants
average EU 27	**5,2**	**42,3**	**106,5**	**148,8**	**46,6**
average EU 15	**5,5**	**49,9**	**109,0**	**158,9**	**51,6**
average EU 12	**4,8**	**31,9**	**103,2**	**135,0**	**39,8**
Japan	**6,2**	**43,0**	**79,3**	**122,3**	**68,3**

Source: own elaboration according to [7] 8th pillar: Availability and use of ICTs, pp. 377-382.

Note. 1 118 countries of the world are evaluated by using data from 2006, resp. the most accessible data.

Note. 2 The data from the Malta are not available.

Japan has a clear advantage in terms of companies' ability to absorb new technologies as well as in the number of Internet users. More than a third of Japanese uses the Internet regularly. The countries of the EU are not a quite homogeneous society. The most balanced parameter between the subgroups EU 15 and EU 12 is the ability to absorb new technologies. Range variation of all the data is the same for both groups (1,9). The countries under the average occur in both groups (4,8) – 2 countries in the EU 15 and 5 countries in the EU 12. One country in each group reaches the average value.

Regarding telecommunication, respectively telephone infrastructure, the EU 15 reaches the highest values. Japan and the EU are comparable in main telephone services but Japan surprisingly totally falls behind in mobile phones services. From more detailed view, it can be seen that the distribution of landline phones (main telephone stations) in the EU is almost the same, while there is an unbalanced situation in distribution of mobile phone base stations in the group EU 15. It is obvious that mobile phones are suitable supplements for telecommunication infrastructure for the countries of the EU 12 because it does need any finances in under ground cables.

From point of view of Internet usage statistics, the situation is better in the EU 15 but with unbalanced portfolio among the countries. The new countries significantly fall back behind the average of the EU 15 and Japan but the range variation is roughly a half-size in comparison with the EU 15. It can be simply summarized that both, the integrating countries of the EU 27 and, Japanese open economy put the emphasis on informatics and telecommunication technology. Financial support from the governments and private corporations represents an important element not only for research but also for development, innovations and it also supports the development of economic globalization. Among the 5 leading economies in the world in terms of portion of expenses on Research and Development (R&D) are the USA, Japan and representatives from the EU are Germany, France and United Kingdom which fall back in a long interval from the USA and Japan. [13] In all presented countries, the share of private expenditure on R&D is between 60% – 70%. Concrete data are shown in Table 3.

Table 3 – Total and business R&D expenditures– the 5 leading economies in the world (mld USD)

indicator	Total R&D			Business R&D			B/T share
country/year	1996	2002	growth rate 02/96	1996	2002	growth rate 02/96	2002
world	575,6	676,5	1,18	376,3	449,8	1,20	0,66

USA	**197,3**	**276,2**	**1,40**	**142,4**	**194,4**	**1,37**	**0,70**
Japan	**138,6**	**133**	**0,96**	**92,5**	**92,3**	**1,00**	**0,69**
Germany	**52,3**	**50,2**	**0,96**	**34,6**	**34,8**	**1,01**	**0,69**
France	**35,3**	**32,5**	**0,92**	**21,8**	**20,6**	**0,94**	**0,63**
U.K.	**22,4**	**29,3**	**1,31**	**14,5**	**19,6**	**1,35**	**0,67**

Source: own elaboration according to [6] p. 105.

It is possible to complete these absolute numbers by the portion of expenses on R&D on GDP of the EU countries and Japan (see Chart 1). In the chart, it is evident that there is only a small jump of Japan ahead the EU in terms of public expenditure on R&D (index Japan/EU=1,14) but the share of business expenditure on R&D is almost twice as big in Japan (index Japan/EU=2,05).

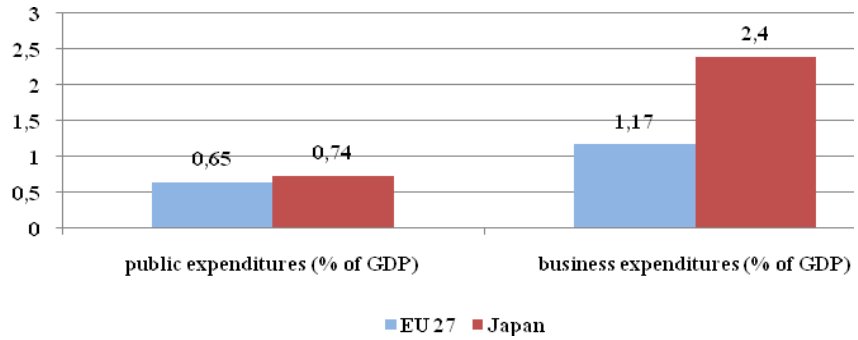


Chart 1 - R&D expenditures in EU and Japan in 2006
Source: own elaboration according to [8]

The European Commission has laid out of 3% of GDP for R&D but it has not been reached yet as it is shown in the Graph 1. Japan exceeds this level thanks to relatively high share of business expenditure on R&D.

2.2 Foreign Direct Investment (FDI) as an indicator of transnationalization

The most important factor of transnationalization, as one of the globalization processes, is Foreign Direct Investment (FDI), which is its „hard" factor.
According to the OECD definition, FDI represents *„…direct investment of businesses, when the foreign investor owns more than 10% or more capital shares or voting rights whereas 10% represents an effective share on management. The most significant characteristics of FDI, that is different from Foreign Portfolio Investment, is the fact that FDI intends to control over the company*. [13] FDI is an economic phenomenon, which has the potential to be a dynamic element in global economic interdependence; the element which can bring advantages to both parties

- Investing economy (country which is an investment provider) that its capital allocation decisions bring higher appreciation rate.
- Host economy (the recipient of investment) which can use other sources for wealth creation because without the capital investment it is not possible to involve them effectively.

The potential FDI comes from few factors (besides market size) which are supposed to have an influence on foreign investor perception of the environment. These include namely: GDP per capita, GDP growth rate, share of exports in GDP, level of information and communication technology development, share of R&D expenditure in GDP, share of students in tertiary sector in population, risk level (the higher potential, the lower risk), market share of automotive components import and electronic products, but also share of global inward FDI as an investment climate indicator. [14]
There is an essential difference between the EU and Japan in comparison of share of inward FDI on their global value. Indeed, it can be caused by space and population diversity (see Table 1) but these facts are not a sufficient explanation for more than 40-fold predominance of the EU over Japan in terms of FDI flow and condition. It can be caused by the fact that the EU countries heavily invest "inside" the group integration, it means among them.
There have been created Tables 4 and 5 to give an idea about the extent of inward FDI, resp. outward FDI in the years 1990-2007. Minimal and maximal values of their flow and condition are processed there as well as average value for both, the EU 27 and Japan in percentage expression in relation to global value.

Table 4 – Selected inward FDI indicators (percentage of total world)

country	indicator	min	max	average 1990-2007
Japan	Flow	-0,46106	1,652837	0,679198
	Stock	0,507404	1,156001	0,853976
EU 27	Flow	29,66602	51,98725	42,08433
	Stock	36,58153	46,91642	40,79984

Source: own elaboration according to [10]

Notice 1: FDI stock is the value of the share of their capital and reserves (including retained profits) attributable to the parent enterprise, plus the net indebtedness of affiliates to the parent enterprises.

Notice 2: FDI inflows and outflows comprise capital provided by a foreign direct investor to a FDI enterprise, or capital received by a foreign direct investor from a FDI enterprise. FDI includes the three following components: equity capital, reinvested earnings and intra-company loans. The negative components of FDI are called reverse investment or disinvestment.

Table 5 – Selected outward FDI indicators (percentage of total world)

country	indicator	min	max	average 1990-2007
Japan	Flow	2,090234	20,08604	6,356887
	Stock	3,477774	11,89214	6,811519
EU 27	Flow	37,08315	71,66516	50,104
	Stock	40,46104	54,38647	46,54412

Source: own elaboration according to [10]

The table shows significant differences in the extent of both types FDI in monitored entities. While the values of both types FDI are close in the EU 27, particularly at FDI condition (average outward FDI/average inward FDI = 1,2), Japan has an evident overbalance in condition of outward FDI (average outward FDI/average inward FDI = 8).
However, the development of FDI over time is also interesting, particularly monitoring over a 17-year period. While the flows show considerable volatility, the comparison of FDI condition shows very interesting trends (see Charts 2 and 3). In Japan, stagnation of inward FDI condition can be concluded during the monitored period. There is a decrease in outward FDI condition in years 1995 (under 10% of global value) and 1999 (under 5% of global value)

In the EU 27, the both indicators have a growing trend, outward FDI condition is evolving more dynamically compared to inward FDI condition. It means that the capital of the countries in the EU 27 is able to associate with other sources of wealth outside of home country. It is important to point out again that the values concerning so-called inward FDI within the EU 27 are also included in the measured values.

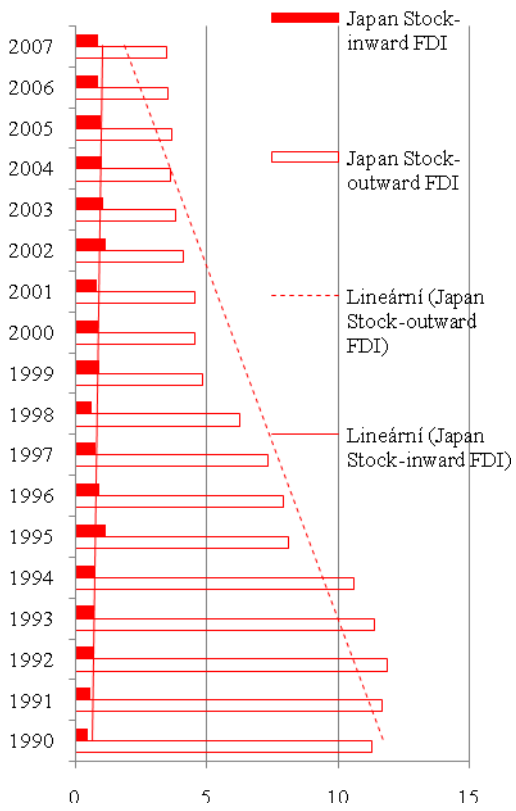


Chart 2 – Development of Japanese inward and outward FDI
Source : own elaboration according to [10]

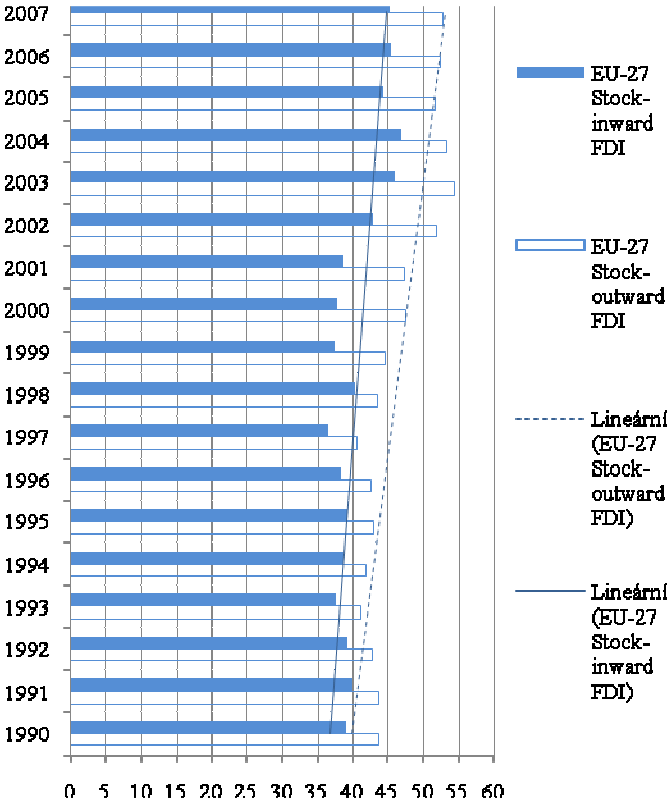


Chart 3 – Development of inward and outward FDI of the EU 27
Source: own elaboration according to [10]

For evaluation of FDI performance are used two types of rates with similar structure [14]. It is Inward FDI Performance Index and Outward FDI Performance Index. FDI Performance Indexes represent the extent to which the country participates on total world FDI in relation to its share of global GDP. A value greater than 1 means that the country receives the investment, resp. invests more FDI than corresponds to its economic size and vice versa. A negative value means that divestment occurred over the monitored period.

$$PI_{FDI} = \frac{FDI_i / FDI_w}{GDP_i / GDP_w} \qquad (1)$$

PI_{FDI}	Performance index (inward= inflows or outward=outflows FDI)		
FDI	Foreign direct investment	Index „i“	value of „i“ country
GDP	Gross domestic product	Index „w“	world value

Besides the influence of size market, PI_{FDI} also records the influences of other factors on inward FDI – business climate, economic and political stability, natural resources,

infrastructure, skills and technology, opportunities for participation in privatization, the effectiveness of FDI promotion in the host country.
Distinctions of particular countries, in the value of the achieved outward FDI Performance Index, reflect two groups of factors describing transnational corporations, namely:

- Competitive force connected with „proprietary advantages" (innovation, brand, managerial and organizational skills, access to information, financial and natural resources, size and network advantages, which are supposed to be allocated and used abroad;
- „Location factors" which acknowledge economic conditions linked to production of various goods and services in comparison with home and host economy (relative market size, production and transportation costs, labour skills, infrastructure and technology support).

If true,

$$\frac{inward\ PI_{FDI}}{outward\ PI_{FDI}} > 1 \qquad (2)$$

then the country is a net recipient of FDI and its predominant role is a role of a host country.

Whereas the result is

$$\frac{inward\ PI_{FDI}}{outward\ PI_{FDI}} < 1 \qquad (3)$$

The country is a net FDI provider; it has a role of investing economy abroad.
Positions of particular evaluated countries are illustrated in Table 5. The development of the period of 1990-2007 is divided into four three-year periods. The last period is used for descending sort of countries depending on their reached values and it is possible to conclude with a high degree of assurance, that not only economic strength and country performance have the influence on appropriate positioning.

Table 5 - Relations "inward FDI performance index/outward FDI performance index" in EU 27 and Japan

country	1990-92	1995-97	2000-02	2005-07	country	1990-92	1995-97	2000-02	2005-07
Romania	**5,96**	**-264,00**	**-226,75**	**82,77**	**Austria**	**0,66**	**1,81**	**0,98**	**0,92**
Bulgaria	**79,50**	**-18,94**	**57,97**	**26,72**	**Slovenia**	**-42,92**	**24,89**	**6,15**	**0,85**
Slovakia	**12,81**	**4,54**	**111,60**	**10,51**	**Netherlands**	**0,72**	**0,53**	**0,79**	**0,73**
Czech Republic	**31,95**	**24,49**	**40,72**	**9,68**	**Greece**	**131,50**	**18,50**	**0,71**	**0,72**
Latvia	**17,58**	**-18,61**	**28,10**	**8,56**	**France**	**0,67**	**0,86**	**0,40**	**0,70**
Lithuania	**x**	**21,17**	**48,17**	**3,91**	**Denmark**	**0,83**	**0,81**	**1,01**	**0,67**
Poland	**63,40**	**101,09**	**107,18**	**3,03**	**Sweden**	**0,47**	**1,12**	**0,72**	**0,63**
Estonia	**54,02**	**3,20**	**2,71**	**2,16**	**Italy**	**0,78**	**0,47**	**0,74**	**0,57**
Hungary	**100,73**	**17,81**	**6,67**	**2,03**	**Germany**	**0,11**	**0,24**	**2,21**	**0,45**
Cyprus	**11,73**	**5,92**	**2,54**	**1,93**	**Spain**	**4,92**	**0,94**	**0,75**	**0,40**
Portugal	**6,62**	**1,39**	**0,70**	**1,37**	**Belgium a Luxembourg**	**1,50**	**1,39**	**0,84**	**0,16**
United Kingdom	**1,47**	**0,57**	**0,54**	**1,28**	***Japan***	***0,08***	***0,05***	***0,21***	***0,11***
Finland	**0,65**	**0,42**	**0,45**	**1,17**	**Ireland**	**5,60**	**2,69**	**4,48**	**-0,13**
average of EU 27	***2,09***	***2,08***	***1,32***	***1,05***	**Malta**	**x**	**17,95**	**9,22**	**-1593,00**

Source: own elaboration according to [15]
Note: descending sort according to the period 2005-07.

Negative values, which had been reached by Romania and Bulgaria before the entrance into the EU, but also Ireland and Malta in the last monitored period, are the expression of Foreign Direct Divestment. As expected, Japan is one of the major economies investing abroad, which is adequate to its economic strength and performance. There is a visible trend from the average values of the EU 27 towards stabilization of inward and outward FDI by decreasing relational value.

Nevertheless, particular countries have a different "history". The absolute investor over the monitored period is the Netherlands, France, and Italy. On the contrary, the absolute recipients are Cyprus, Hungary, Estonia, Poland, Lithuania, Latvia, the Czech Republic and Slovakia – the countries which joined the EU in 2004. For example Slovenia, Greece and Romania report turbulent development - each with its own development specification.

Integration of the EU 27 is not unified in terms of assessment of FDI possibilities and effects. UNCTAD matrix can be applied for coarse classification of national economies which combines the performance and potential degree of inward FDI. [14] It forms 4 basic groups of countries. Monitored countries of the EU 27 and Japan occupy a position in two quadrants of the classification matrix (see picture 1).

	High performance inward FDI	**Low performance inward FDI**
High potential inward FDI	**Bulgaria, Romania,; Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia; Belgium, Luxembourg, Netherlands, Sweden, United Kingdom.**	**Japan; Austria, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Portugal, Spain; Slovenia.**
Low potential inward FDI	-	-

Picture 1 – Classification matrix of countries according to inward FDI performance and potential

Source: own elaboration according to [14]

Note: Performance is evaluated by Inward FDI Performance Index, potential by Inward FDI Potential Index.

All countries are characterized by high inward FDI potential, but do not have the same inward FDI performance. Countries belonging to group with high inward FDI performance are all countries which joined the EU in 2004 and later (except for Slovenia), then Belgium, Luxembourg, Netherlands, Sweden and United Kingdom. Japan belongs to group with high inward FDI potential but low inward FDI performance which corresponds not only to so-called hard facts but also soft facts of growth.

Inward and outward FDI performance indexes enable to evaluate the countries as FDI providers and recipients. In addition, inward FDI, as a percentage of gross fixed capital formation, can be considered as an indicator of participation rate on processes of transnationalization – it means the share of FDI in total investments of the country.

Japan and the EU vary considerably in this aspect. During the period from 1990 to 2006, Japan has an average share of FDI in total investment of the country about 1 / 3 percent, while the EU 27 countries more than 13%. Chart 4 shows a relatively similar development over time (values of Japan are ten times magnified for better chart illustration).

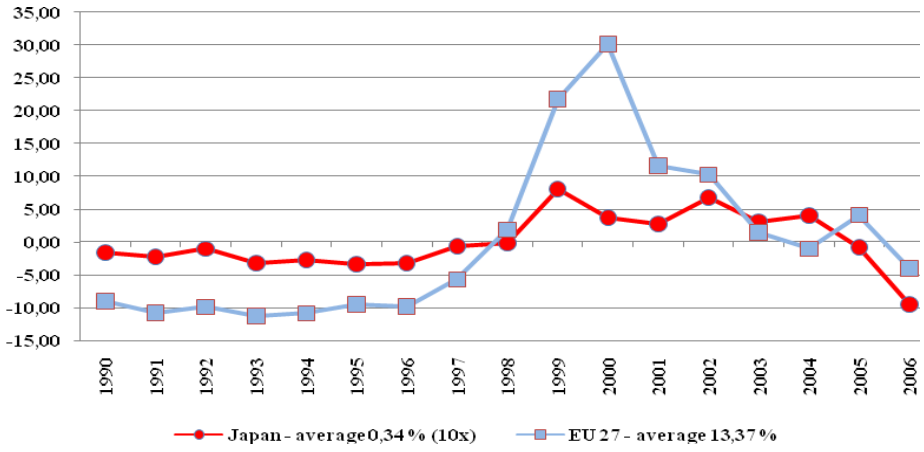


Chart 4 – Comparison of share development of inward FDI in total investment in the EU and Japan

Source: own elaboration according to [10]

The chart compares the share of Japan's and EU countries' inward FDI on gross fixed capital formation during the period from 1990 to 2006. It illustrates the shift share of inward FDI flow from the average of the particular body in the monitored period. Values of Japan are ten times magnified for better illustration. The result of the comparison clearly shows a similar trend (at absolute values). Below average values of shares of FDI in total investment of both entities are reported till 1998. The period 1999-2003 is characterized by above-average shares which decline earlier under the average in the EU than in Japan, but the fall in Japan is characterized by a sharp slope.

3 Growth factors in globalized economy

3.1 Transformation of market structure

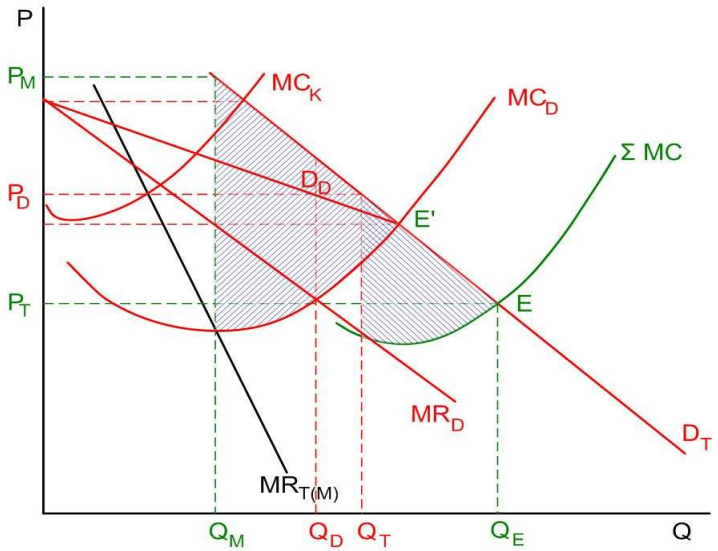
Transnationalization is considered to be one of the basic expressions of globalization of the world economy. Its symbol is Transnational Corporation (TNC). According to the UNCTAD definition, they are: *„parent company and their foreign subsidiaries (affiliates). A parent company controls assets of other units in another country then their home country usually by owning a certain amount of equity capital. It is usually required to own more than 10% equity capital. Foreign affiliates are companies in which an investor (a resident of a foreign country) usually owns more than 10% equity capital.* [11] (The ownership rate is a penetration element of the FDI and TNC definition).

TNC effect on the host economy market can be inconsistent. (Picture 2 shows schematic variations of impacts)

If there is a monopolized host market by a domestic company and incoming foreign capital strengthens competitive firms, which are able to make a competitive edge of firms, then the effectiveness of the incoming foreign capital is positive. It keeps down prices from P_M to P_D and leads to the growth of quantity of production Q_M to Q_T.

If there was a strengthening of a dominant firm in the oligopolistic market, as a result of the TNC effectiveness, the final effect could be negative. There could be an increase in production price and a decrease in quantity of production, in the opposite direction than indicated above.

It is also possible that TNC would transform a monopolistic-competitive market into an oligopolistic market by technology strengthening one of the companies of the monopolistic competition above the level of the others. Then, the effect of TNC would be positive again because prices would decrease from P_{MK} to P_D and the quantity of production would increase from Q_{MK} to Q_T. It is obvious that under the present conditions of imperfect competition, it is impossible to achieve prices P_E and quantity of production Q_E of the perfect competition.

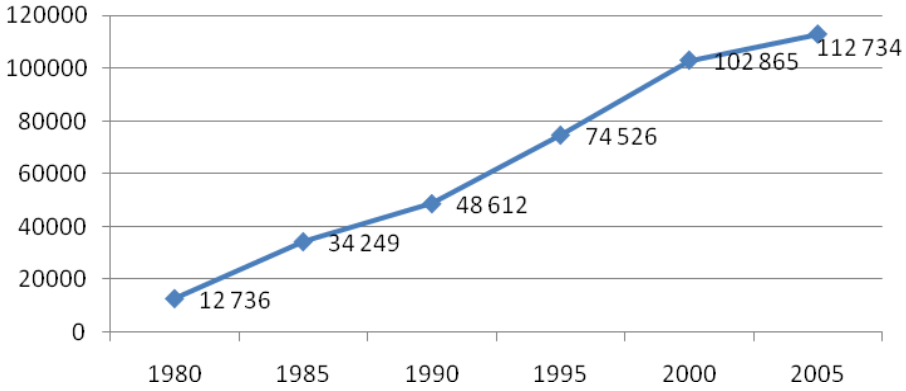


Picture 2 – Monopoly versus monopolistic competition versus oligopoly
Source: own elaboration

Legend:

P	Price	Index M	Monopoly variables
Q	Quantity	Index D	Dominant firm variables
MC	Marginal cost	Index MK	Monopolistic competition variables
D	Demand	Index T	Total variables
MR	Marginal revenue	Index E	Equilibrium variables
E, resp. E´	Equilibrium		

Anyway, the impact of TNCs on host economies and their operation is not possible to overlook as it is demonstrated by almost 10-fold increase in foreign affiliates in 25 years (1980-2005). It is clearly presented in Chart 5. During the monitored period, average annual global growth of foreign affiliates is 35,4 % .



Graph 5 - Number of foreign affiliates of home-based TNCs abroad
Source: own elaboration according to [16]

From the 30 largest TNCs (evaluated according to size of foreign assets) are 17 TNCs from the EU (however, there are just 6 countries from the EU 27). TNCs are the most often from Germany, France and United Kingdom. One TNC is represented by Netherlands, Spain and Italy), 3 Japanese TNCs (connected with brands as Toyota, Honda, Nissan); in addition, within the 30 largest TNCs, 8 are presented by USA, 1 by Switzerland, 1 by Hong Kong and China.[9] Intensity of transnationalization and internationalization of TNCs is possible to evaluate by Transnationalization Index (4)

$$TNI = \frac{1}{3}\left(\frac{FA}{TA} + \frac{FS}{TS} + \frac{TE}{FE}\right) \quad (4)$$

TA	total assets	FS	foreign sales
FA	foreign assets	TE	total employees
TS	total sales	FE	foreign employees

and internationalization index (5) - while the affiliates are considered to be only the affiliates with the majority of voting rights.

$$INI = \frac{FAC}{TAC} \quad (5)$$

TAC	total number of affiliated companies	FAC	number of foreign affiliated companies

Average TNI in TNCs of the EU is lower (56%) than in Japanese TNCs (63%), while INI is opposite – TNCs of the EU show INI higher than 66%, Japanese only 43%. [11]
It can be deduced, that foreign parts of Japanese TNCs are "economically stronger" nevertheless more concentrated. By contrast, "European" TNCs are characterized by lower measured TNI, but higher amount of foreign affiliates on total number of branches of the parent company. It means higher nominal expansion, market spread which can be perceived as a positive impact on EU economic integration.

3.2 Competitiveness and soft growth factors

Globalization processes connected with increase of competition bring pressures on strengthening competitiveness of economic entities with the aim to increase their effectiveness in achieving economic growth. Growth itself depends on the amount of physical and human capital, technology level, capital structure determinants, associated with business size, profitability, financial distress risk and tax rates. It also depends on factors which are usually difficult to quantify, so-called soft growth factors, which are associated with subjective perception of the economic environment and market participants. Seemingly subjective opinions get their feedback afterwards they were published: they become a part of formation of rational expectations which influence behaviour of market players again. In this context, Global Competitiveness Index (GCI) is very useful and informative. It is elaborated by World Economic Forum. [12] GCI is based on 12 pillars, which assesses: 1. Institutions, 2. Infrastructure, 3. Macroeconomic stability, 4. Health and primary education, 5. Higher education and training, 6. Goods market efficiency, 7. Labour market efficiency, 8. Financial market sophistication, 9. Technological readiness, 10. Market size, 11. Business sophistication, 12. Innovation. Each country is assessed by 10 indicators spread unevenly between single pillars and on that basis it gets GCI score (theoretically in the interval 1-7), simultaneously GCI ranking. Some interesting numbers: GCI 2008-09, USA occupies the first place (score 5,7), Chad is the last (134.) with the score 2,8. Table 6 shows GCI 2008-09 of the countries in the EU and Japan.

Table 6 – GCI 2008-09 selected countries: score and ranking

country	score	rank	country	score	rank	country	score	rank	country	score	rank
Denmark	5,6	3	Austria	5,2	14	CR	4,6	33	Malta	4,3	52
Sweden	5,5	4	France	5,2	16	Cyprus	4,5	40	Poland	4,3	53
Finland	5,5	6	Belgium	5,1	19	Slovenia	4,5	42	Latvia	4,3	54
Germany	5,5	7	Ireland	5,0	22	Portugal	4,5	43	Hungary	4,2	62
Netherlands	5,4	8	Luxembourg	4,9	25	Lithuania	4,4	44	Greece	4,1	67
Japan	5,4	9	Spain	4,7	29	Slovakia	4,4	46	Romania	4,1	68
U.K.	5,3	12	Estonia	4,7	32	Italy	4,4	49	Bulgaria	4,0	76

Source: own elaboration according to [12]

Among top 10 countries are only 5 countries from the EU and Japan. Among top 30 are another 7 traditional countries from the EU. Countries that follow this ranking are the countries which joined the EU in 2004 but also Portugal, Italy and Greece. Greece has the same GCI value as Romania. Bulgaria comes last in this ranking. Range of variation of the score in the monitored countries is 1,6 (approximately 23% from the possible maximum).
GCI does not evaluate only "hard" factors but also "soft" factors which influence the achieved score and the ranking of countries. Analysis of the most problematic factors for doing business is very instructive in this regard. When selecting only those indicators which present more than 5% of the respondents, then 12 obstacles to business (indicators) occur in the EU 27 and Japan. According to the order of barriers to business given by respondents, they get the importance. Chart 6 presents an overview of the most problematic factors for doing business of the whole EU in comparison with Japan.

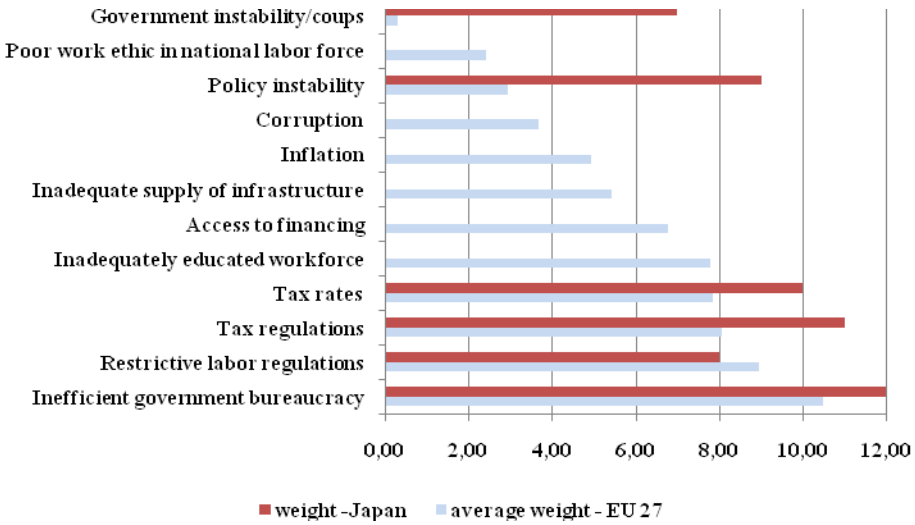


Chart 6 – The most problematic factors for doing business in 2008-09
Source: own elaboration according to [12]

More than 5 % of Japanese respondents indicate in average 6 problematic factors for doing business. 7,44 of the problematic indicators reach 5 % in the EU 27 (the higher value is undoubtedly caused by the diversity of national economies). Both, in Japan and the EU 27, the biggest obstacle to business is considered to be inefficiency of government bureaucracy which is in Japan even emphasised by fear of government instability. The most negative

aspect perceived in the EU 27 is restrictive work regulation. Further, in both entities tax area is perceived very negatively, tax regulation methods as well as tax rates.
The most problematic factors for doing business in the EU 27 (presented in more than 20 countries) are considered: Inefficient government bureaucracy (26), Access to financing (23), Inadequately educated workforce (23), Restrictive labour regulations (23), Tax regulations (22) a Tax rates (22).

4 Conclusions

Presented findings of the FDI and TNC analysis, as important indicators of globalization processes also concerning the EU 27 and Japan, show that single purposely organized economic processes (internationalization, transnationalization and integration) transform themselves from certain quantity into a new quality. They become an expression of economic globalization with its fundamental, spontaneous and rational goal: increasing the economic efficiency. A doubtless element of these processes – not only catalyst – but also their inciter – is TIT technology development.
Globalization effects correspond to the mentioned objective and meet the plan particularly in terms of an increase in market competition. On the other hand, there also are some negative consequences. Globalization increases potential market failures i.e. decrease of economic efficiency. However, economic processes cannot be evaluated only by hard indicators, but on the contrary, so-called soft indicators play increasingly important role i.e. qualitative characteristics of the economic environment.
The following complex Chart 7 illustrates the indicated connection.

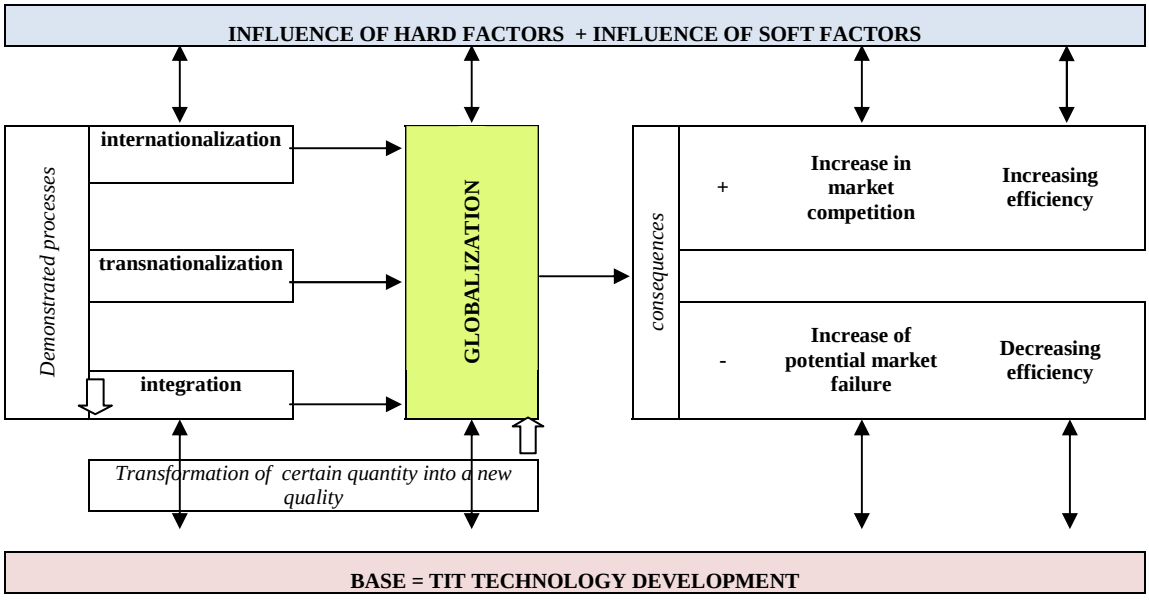


Chart 7 – Globalization: base, processes, influences, consequences

It is important to realize in the economic assessment these days that ongoing processes are global, while their impacts are regional. Regional and economic science is thus exposed to the effects of globalization of the world economy; management of regions should be able to work with the global character of the world.

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