UTICAJ STRANIH DIREKTNIH INVESTICIJA NA EKONOMSKI RAST U EVROPSKOJ UNIJI

IMPACT OF FOREIGN DIRECT INVESTMENTS ON ECONOMIC GROWTH IN THE EUROPEAN UNION

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REZIME

Investicije su faktor ekonomskog rasta i razvoja bez obzira na njihovo unutrašnje ili eksterno porijeklo. Strane direktne investicije su konstituent ukupnih investicija, što znači da i one imaju uticaj na ekonomski rast. Motivi investitora za transfere kapitala u druge zemlje su brojni, pa strane direktne investicije u svijetu kontinuirano rastu. Ove trendove povremeno ugrožavaju periodi nestabilnosti na globalnom nivou. Većina svjetskih ekonomija je otvorena za priliv, ali i odliv investicija u druge zemlje. Ekonomija Evropske unije je vodeća svjetska privreda sa najvišim stepenom otvorenosti kako za uvoz tako i za izvoz kapitala.

Polazna hipoteza rada je dokaz o korelativnoj vezi stranih direktnih investicija i rasta bruto domaćeg proizvoda. Za ukupno analizirani period od 2004. do 2012. godine utvrđena je zanemarljiva, ali pozitivna korelacija (r=0,183), što samo u određenoj mjeri dokazuje hipotezu o uticaju stranih direktnih investicija na rast. Korelacija ukazuje na određeni, ali ne značajan i veći doprinos stranih direktnih investicija ekonomskom rastu.

Analize po subperiodima potvrđuju hipotezu, jer je u stabilnom subperiodu od 2004. do 2007. godine ostvarena jaka i pozitivna korelativna veza (r_1=0,992), što ukazuje na značajan doprinos stranih direktnih investicija rastu, dok ekonomski nestabilan period karakteriše negativna i zanemarljiva korelaciona veza između

SUMMARY

Investments represent a factor of economic growth and development, regardless of their internal or external origin. Foreign Direct Investments (FDI) represent a constituent of the total investments, meaning that they have a certain impact on economic growth. The motives of investors in capital transfers to other countries are numerous, causing worldwide foreign direct investment to continuously increase. Such trends are periodically threatened by instability periods on a global scale. Most of the world economies are open to the inflow and to the outflow of investments into other countries. The economy of the European Union is the world's leading economy with the highest level of transparency for both import and export of capital.

The starting hypothesis of this paper is the evidence of correlation between foreign direct investment and gross domestic product growth. For the total period analyzed from year 2004 to 2012 there was a minor but a positive correlation (r=0.183), which to a certain extent proves the hypothesis about the FDI impact on economic growth. The correlation indicates a certain, but not a significant contribution of FDI to economic growth.

Analyses per sub-periods confirm the hypothesis, for during a stable sub-period from year 2004 to 2007 a strong and positive correlation was made (r_1=0.992), indicating a significant contribution of foreign direct investment to the growth, while the economically unstable period is characterized by negative and insignificant correlation between

stranih direktnih investicija i rasta BDP/GDP (r_2=-0,237). Dokazano je da su kretanja analiziranih veličina identična sa makroekonomskim teorijama i relevantnom ekonomskom praksom.

Ključne riječi: Investicije, strane direktne investicije, rast, Evropska unija

foreign direct investment and GDP growth (r_2=-0.237). It has been proven that the trends of the values analyzed are identical to the macroeconomic theories and relevant economic practice.

Key words: investments, foreign direct investment, growth, the European Union

STRANE DIREKTNE INVESTICIJE

Opšti pristup

Investicije predstavljaju jedan od najvažnijih makroekonomskih agregata. Klasici i savremeni teoretičari se slažu da su investicije nužne za rast svake privrede, odnosno da bez investiranja nema privrednog rasta. Ovo se odnosi, kako na domaće, tako i na investicije iz inostranstva. Apsolutni i relativni iznosi eksternih investicija razlikuju se po zemljama i ne zavise uvijek od ekonomske snage određene privrede. Strane direktne investicije ulaze u bilansnu jednačinu bruto domaćeg proizvoda, jer čine jedan od najvažnijih oblika ukupnih investicija. Investicije (*I*), kao što se može vidjeti iz jednačine

FOREIGN DIRECT INVESTMENTS

General approach

Investments are one of the most important macroeconomic aggregates. Both classic and contemporary theorists agree that the investments are necessary for the growth of any economy, and that there could be no economic growth without investments. This applies both to domestic and to foreign investments. Absolute and relative amounts of external investments differ from country to country and are not always dependant on the economic power of a given economy. Foreign direct investments are included in the balance equation of the gross domestic product, as they constitute one of the most important forms of total investment. Investments (*I*), as can be seen from equation

$$Y=C+I+G+NX$$

gdje su:
C - potrošnja,
I - investicije,
G - državna portošnja,
NX - neto izvoz.

wherein:
C - consumption,
I - investments,
G - government spending,
NX - net export.

Strane direktne investicije predstavljaju sve oblike međunarodnih investicija koje čine rezidenti iz jedne zemlje (direktni investitori) u cilju preuzimanja trajnog udjela u firmama koje posluju u drugim zemljama. Smatra se da postoje trajni udjeli ukoliko je direktni strani investitor preuzeo najmanje 10% običnih akcija (ili drugog vida vlasničkog kapitala), ili glasačkih prava firme direktne investicije.[1]

Foreign direct investments represent all forms of international investments provided by residents of a country (direct investors) in order to obtain a permanent share in the companies operating in other countries. It is believed that there are permanent shares if the foreign direct investor obtained at least 10% of the common stock (or other form of equity), or of the voting rights of the company direct investment.[1]

1 Definicije i klasifikacije stranih direktnih investicija su bazirane na: *IMF Balance of Payments Manual, Fifth Edition; BPM5 OECD Benchmark Definition of Foreign Direct Investment, Third Edition;* i *Manual on Statistics of Internacional Trade in Services* sa kojima je usklađena klasifikacija Eurostat-a i evropske nacionalne statističke službe.

1 Definitions and classifications of Foreign Direct Investments are based on: *IMF Balance of Payments Manual, Fifth Edition; BPM5 OECD Benchmark Definition of Foreign Direct Investment, Third Edition;* and *Manual on Statistics of Internacional Trade in Services* with which the classification of Eurostat and the European national statistical service was synchronised.

Strane direktne investicije se prema zemlji investitora i zemlji destinacije, odnosno zemlji prema kojoj se usmjeravaju mogu podijeliti na: (1) unutrašnje strane direktne investicije (Invard Foreign Direct Investment), ili investicije u posmatranoj privredi, odnosno investicije stranaca u firmama rezidenta u posmatranoj nacionalnoj privredi i (2) spoljne strane direktne investicije (Outward Foreign Direct Investment), ili investicije u inostranstvu, tj. investicije rezidenata u firmama filijala u inostranstvu.

Bilansno, unutrašnje strane direktne investicije predstavljaju priliv, a spoljne strane direktne investicije odliv kapitala iz posmatrane zemlje. Strane direktne investicije uključuju inicijalne i naknadne investicije direktnog investitora u formi vlasničkog kapitala, zajmova i reinvestirane zarade, a mogu biti uključene i investicije filijala u inostranstvu koje pripadaju direktnom investitoru.

Postoje dva osnovna oblika međunarodnih tokova investicionog kapitala: strane portfolio investicije (SPI) i strane direktne investicije (SDI). Ova dva oblika kapitala se u osnovi razlikuju u kontrolnoj i upravljačkoj funkciji.

Strane portfolio investicije su ulaganja u vlasništvo. Upravljačke, i, u velikoj mjeri, kontrolne funkcije su prenesene na menadžere. Strane direktne investicije objedinjavaju vlasničke, upravljačke i kontrolne funkcije u rukama investitora.

U cilju praćenja investicija, izdvajaju se sljedeći glavni analitički pokazatelji vezani za strane direktne investicije.

1. *Tokovi stranih direktnih investicija*, koji predstavljaju nove investicije u toku posmatranog perioda (najčešće period od godinu dana). Oni predstavljaju pozicije kapitalnog računa platnog bilansa. Ukupni tokovi se dijele prema instrumentima korišćenim pri investiranju, i predstavljaju ih: vlasnički kapital (vlasništvo u filijalama), i akcije u zavisnim i pridruženim preduzećima; reinvestirana zarada kao dio neraspoređene zarade investitora koja nije raspoređena; ostali kapital SDI, koji čini zaduživanje i kreditiranje fondova, uključujući i dužničke finansijske

Foreign direct investment may be divided on the basis of the investor country and the destination country, i.e. the country which the investment is intended for: (1) Inward Foreign Direct Investment, or investments in the respective economy, i.e. investments of foreigners into resident companies of the respective national economy and (2) Outward Foreign Direct Investment, or investments abroad, i.e. investments by the residents in overseas subsidiary companies.

From the balance sheet basis, Inward FDI represents the inflow, while Outward FDI represents the outflow of capital from a given country. Foreign Direct Investments include both initial and subsequent investments of a direct investor in the form of equity, loans and reinvested earnings, and may be involved in the investments of the abroad affiliates belonging to the direct investor.

There are two main forms of International Investment Capital Flows: Foreign Portfolio Investment (FPI) and Foreign Direct Investment (FDI). These two forms of capital essentially differ both in control and in management function.

Foreign Portfolio Investments are investments in the ownership. Control, and to a large extent, management functions are delegated to the managers. Foreign Direct Investment unify ownership, management and control functions in the hands of investors.

In order to monitor the investments, the following main analytical data related to Foreign Direct Investment are specifically marked:

1. *Foreign Direct Investment Flows*, representing new investments over the observed period (usually one year). They represent the position of the capital account of balance of payments. Total flows are divided by the instruments used in investment, and are represented as follows: equity (ownership of affiliates), and shares in subsidiaries and associated companies; reinvested earnings as a part of earnings not allocated to investors; other FDI capital, comprised of borrowing and lending of funds, including debt instruments and

instrumente i trgovačke kredite između investitora i firme direktne investicije.

2. *Stokovi stranih direktnih investicija* su vrijednosti investicija na kraju perioda. Bilansno, spoljne strane direktne investicije su aktiva, a unitrašnje pasiva za posmatranu zemlju. Stokovi stranih direktnih investicija se dijele na: vlasnički kapital i reinvestirane zarade, koje čini vrijednost sopstvenog kapitala firme, uključujući i vrijednost sopstvenih rezervi akumuliranih iz ranije reinvestiranih zarada; ostali kapital stranih direktnih investicija je stok dugovanja (aktive i pasive) između direktnog investitora i firme direktne investicije.
3. *Dohodak stranih direktnih investicija* je dohodak pripisan direktnim investitorima tokom perioda, tj. prirast dohotka. On se dijeli na tri kategorije: dividende naplative u posmatranom periodu i profite filijala doznačene direktnom investitoru, bez odbitka poreza na prihod; reinvestirane zarade; kamate na zajmove, koje čine pripisane kamate u posmatranom periodu na zajmove filijalama, bez odbitka poreza na dobit.

Pored navedenog, važan je i intenzitet stranih direktnih investicija mjeren kao procenat bruto domaćeg proizvoda (odnos prosječnih tokova unutrašnjih i spoljnih stranih direktnih investicija i GDP). Viši intenzitet znači veći obim stranih direktnih investicija u odnosu na veličinu privrede.

Strane direktne investicije u privredni razvoj

Ulogu i značaj stranih direktnih investicija za nacionalnu privredu Todaro i Smit (2006, str. 680-683) prvenstveno vide u ključnim makroekonomskim momentima. One predstavljaju jedan od najpovoljnijijih oblika angažovanja strane privatne štednje u procesu finansiranja ekonomskog razvoja, odnosno smanjivanja jaza između planiranih investicija i lokalne štednje. Drugo, postoji značajan doprinos stranih direktnih investicija u prevazilaženju spoljnotrgovinskog jaza zemlje

trade credits between the investor and direct investment company.

2. *Stocks of Foreign Direct Investments* are the investments worth at the end of a given period. From the balance sheet basis, outward Foreign Direct Investments are the assets, with the Inward FDI being the liabilities for the given country. Stocks of FDI are classified as follows: equity capital and reinvested earnings, making the value of the company's own equity, including the value of their own reserves accumulated from earlier reinvested earnings; other FDI capital is a debt stock (assets and liabilities) between the direct investor and direct investment company.
3. *FDI Income* is attributable to direct investors during the given period, i.e. income increase. It is divided into three categories: Dividends payable in the given period and affiliates profits remitted to the direct investor, without deduction of income tax; reinvested earnings; interest on loans, which account for the interest accrued during the given period to the loans given to the affiliates, without deduction of income tax.

In addition, the intensity of Foreign Direct Investments measured as a percentage of GDP (ratio of the average Inward and Outward FDI flows and GDP) is also very important. The higher intensity means a higher volume of Foreign Direct Investments relative to the size of the economy.

Foreign Direct Investments in economic development

The role and importance of Foreign Direct Investments in the national economy is primarily visible in key macroeconomic moments, as explained by Todaro and Smith (2006, p. 680-683). They represent one of the most favourable forms of engaging foreign private savings in the financing of economic development, and reducing the gap between planned investment and local savings. Secondly, there is a significant contribution of FDI in overcoming the foreign trade gap of the country in which the investment

u koju se ulaže. Dakle, strane investicije efikasno pokrivaju nesklad između planiranih javnih prihoda i prikupljenih poreza, te drugih oblika prihoda za potrebe javne potrošnje. Postoje velike koristi od stranih direktnih investicija kroz prenos menadžerskih i preduzetničkih iskustava. Konačno, one danas predstavljaju glavni kanal za prenos modernih tehnologija među zemljama.

Direktne strane investicije za stranog ulagača mogu donijeti brojne prednosti (Jovanović-Gavrilović, 2006), među kojima se posebno ističu: uštede u troškovima transporta (kako inputa, tako i gotovih proizvoda), niži troškovi radne snage, raspoloživa infrastruktura, uštede u carinskim troškovima i preferencijalima prilikom uvoza robe, blizina kupaca, mogućnost brzih isporuka, te dostupnost informacija o preferencijama kupaca i kontinuirano prilagođavanje proizvoda zahtjevima tržišta.

Odnos investicija i ekonomskog rasta. Ova međuzavisnost se dokazuje u analizi makroekonomskih agregata, stopa rasta, kretanju investicija, spoljne razmjene i sl. Promjene se odnose na ekonomska kretanja na nacionalnom nivou, na osnovu kojih je moguće ocijeniti uspješnost razvojne politike. Kada pozitivni elementi bilježe rast, postoje pozitivne strukturne promjene. U periodima kriza negativne promjene jačaju (usporavanje rasta i investicija, povećanje nezaposlenosti, rast deficita i sl.) (Vinski, 1967; Samuelson & Nordhaus, 1992; Paul, 1993).

U tom kontekstu su karakteristični su slijedeći agregati i pokazatelji: (1) podaci o ekonomskim performansama kao vrijednosti ključnih makroekonomskih agregata (GDP i investicija), (2) trgovinski odnosi i finansijski položaj nacionslne privrede (uključujući i SDI), pri čemu je izbor ovih agregata logičan i praktičan, (3) GDP per capita (McEachern, 1994) je količnik najznačajnijeg makroekonomskog agregata i broja stanovnika (zemlja, regionalna integracija, region).[2]

2 Za izračunavanje DBP se koriste tri pristupa: (1) zbir bruto dodate vrijednosti, (2) zbir dohodaka u tekućoj proizvodnji i (3) zbir vrijednosti dobara i usluga finalne potrošnje, umnjena za uvoz.

is made. Thus, foreign investments effectively cover the discrepancy between the planned public revenue and tax collected, as well as other forms of revenue meant for public consumption. There are great benefits from Foreign Direct Investments through the transfer of managerial and entrepreneurial experience. Finally, today they represent a major channel for the transfer of modern technology between countries.

Foreign Direct Investment may provide many advantages for foreign investors (Jovanović-Gavrilović, 2006), among which the most important are: savings in transport costs (both of inputs and finished products), lower labour cost, available infrastructure, reduced custom cost and preferential tariff on imported goods, vicinity of the customers, the possibility of fast delivery and the availability of information on customers preferences and continuous adaptation to the market demands.

The ratio of investments and economic growth. This interdependence is evidenced in the analysis of macroeconomic aggregates, growth rates, investment trend, foreign exchange and so on. The changes are related to economic trends at the national level, on the basis of which it is possible to evaluate the success of development policy. When the positive elements are increased, there are positive structural changes. In times of crisis, there is a rise in negative changes (slowing down of growth and investment, rise of unemployment, increase of deficit, etc.) (Vinski, 1967; Samuelson & Nordhaus, 1992; Paul, 1993).

In such context, the following aggregates and indicators are considered as characteristic ones: (1) Data on economic performance as the values of key macroeconomic aggregates (GDP and investments), (2) Trade relations and financial position of the national economy (including FDI), where the selection of the aggregates is logical and practical, (3) GDP per capita (McEachern, 1994) is the ratio of the most important macroeconomic aggregate and the population (country, regional integration, region).[2]

2 Three approaches are used in calculating GDP: (1) the sum of gross value, (2) the sum of income in the current production, and (3) the sum of the value of goods and services of final consumption, minus the import.

Visina outputa govori o razvijenosti određene nacionalne privrede. Dakle, GDP je determinanta razvoja i relevantan makroekonomski pokazatelj ekonomske snage.

Dinamika GDP, agregatno ili per capita determinišu stopu rasta i razvoja. Tačnije, dugoročni realni rast GDP, agregatno ili na per capita osnovi praćen željenim strukturnim promjenama predstavlja fundamentalni pokazatelj razvoja, bez obzira na to da li je riječ o klasičnim, ili o savremenim teorijama. Društvene odnose oslikava „mnogodimenzionalnost razvojnih ciljeva, što prouzrokuje i različite pokazatelje društveno-ekonomskog napredovanja“ (Dragutinović, Filipović & Cvetanović, 2005, str. 329).

Visoke stope rasta i visok nacionalni dohodak zahtijevaju postojanje proizvodnih i drugih kapaciteta, što, pored ostalog, neminovno podrazumijeva kontinuirano investiranje kako sredstvima domaće akumulacije tako i svim oblicima stranih direktnih investicija.

Inače, odnos investicija i GDP je odnos kapitala (ili fiksnih fondova) i outputa, tj. makroekonomski pokazatelj kapitalni koeficijent (računaju se na bruto ili neto osnovi, kao prosječni ili marginalni, obični, tehnološki itd. Jednostavno, mjerenje ekonomske efikasnosti uloženih investicionih sredstava učešćem investicija u GDP (proizvodnji) predstavlja postupak ocjene efikasnosti investicija na makroekonomskom nivou. Iako su kapitalni koeficijenti veoma jednostavni i statični, korelacionom i regresionom analizom se mogu dobiti relevantne informacije o stanju nacionalne privrede ili određene teritorijalne cjeline (regionalna integracija, region).

STRANE DIREKTNE INVESTICIJE I RAST U EVROPSKOJ UNIJI

Strane direktne investicije u Evropskoj uniji

Ukupne investicije u Evropskoj uniji iznose nešto manje od jedne petine (ispod 20%) bruto domaćeg proizvoda. Stopa investicija (I/Y)

Output level indicates the development of a particular national economy. Thus, GDP is the determinant of development and a relevant macroeconomic indicator of economic strength.

Dynamics of GDP, by aggregate or per capita, determine the rate of growth and development. Specifically, a long-term real growth of GDP, either on an aggregate or per capita basis, followed by the desired structural change is a fundamental indicator of development, regardless of whether it is a classic or a modern theory. Social relations are reflected by a multidimensionality of Development Goals, causing different indicators of socio-economic progress” (Dragutinović, Filipović & Cvetanović, 2005, p. 329).

High growth rates and high national income require the existence of manufacturing and other capacities, which, among other things, inevitably involves continuous investment in both domestic accumulation funds and all forms of Foreign Direct Investments.

Normally, the ratio of investment to GDP is the ratio of capital (or fixed funds) and the output, e.g. macroeconomic indicator a Capital-Output-Ratio (calculated on a gross or net basis, as the average or marginal, ordinary, technological, etc.) Simply, measuring the economic efficiency of the investment funds invested by the share of the investment in GDP (production) is the process of evaluating the investment efficiency at the macroeconomic level. Though capital coefficients are very simple and static, correlation and regression analysis can provide relevant information on the state of a national economy or a certain territory (regional integration, region).

FOREIGN DIRECT INVESTMENTS AND GROWTH IN THE EUROPEAN UNION

Foreign Direct Investments in the European Union

Total investments in the European Union are less than one-fifth (below 20%) of the GDP. The investment rate (I/Y) is stable on a

je dugoročno stabilna. Stopa investicija u najrazvijenijim zemljama Unije je niža i kreće se do jedne šestine, dok u novim i slabije razvijenim članicama stopa investicija dostiže čak i do jedne četvrtine autputa (Popović, 2009, str. 108-110).

Kao makroekonomski pokazatelj predmet našeg interesovanja su tokovi priliva stranih direktnih investicija i njihov uticaj na kretanje bruto domaćeg proizvoda.

long-term. The investment rate in most developed EU countries is lower and ranges up to one sixth, while with the newer and less developed countries the investment rate reaches up to one-quarter of the output (Popović, 2009, p. 108-110).

As a macroeconomic indicator, the subject of our interest are the inflows of Foreign Direct Investments and their impact on the GDP trend.

Tabela1
Tokovi SDI u milionima evra za EU 27 (Eurostat, 2012)

Table 1
FDI flows in millions of Euros in EU 27 (Eurostat, 2012)

Godina [Year]	TOKOVI [FLOWS]		Stok (ukupna vrijednost) SDI [Stock (total value) FDI]	
	Odlivi SDI [Outflow FDI]	Prilivi SDI [Inflow FDI]	Odlivi SDI [Outflow FDI]	Prilivi SDI [Inflow FDI]
2004.	369.134	244.179	5,420,856	4,846,365
2005.	669.041	591.234	6,305,140	5,690,696
2006.	879.818	726.462	7,183,987	6,519,759
2007.	1.278.121	1.065.473	8,388,610	7,664,230
2008.	919.366	582.517	8,901,697	7,866,082
2009.	612.534	512.626	9,589,730	8,507,086
2010.	585.530	480.892	10,590,724	9,168,061
2011.	725.924	652.062	11,920,013	10,119,687
2012.	392.379	345.096	13,169,449	11,112,386

Iz tabele 1. se vidi da se prilivi i odlivi tokova stranih direktnih investicija u početnim godinama posmatranog perioda od 2004. do 2007. godine permanentno povećavaju. Ako se, npr., 2004. posmatra kao bazna godina, onda je odliv stranih direktnih investicija u 2005. godini enormno porastao sa 369.134 miliona evra na 669.041 miliona evra, dok se priliv povećao sa 244.179 miliona na čak 591.234 miliona evra, ili preko 100%. Dinamičan trend rasta je nastavljen do kraja 2007. godine.

Početkom 2008. godine dolazi do svjetske finansijske krize koja se iz SAD prenosi i na globalnu ekonomiju. Zahvaćeni su svi segmenti svjetske ekonomije, uključujući i strane direktne investicije. Tokom 2008. godine dolazi do pada tokova u prilivu i odlivu stranih direktnih investicija.

Table 1 shows that the inflows and outflows of Foreign Direct Investments in the early years of the observed period from year 2004 to 2007 are constantly increasing. If, for example, year 2004 is observed as the base year, then the outflow of FDI in 2005 was enormously increased from EUR 369,134 million to EUR 669,041 million, while the inflow increased from EUR 244,179 million to as much as EUR 591,234 million, or more than 100%. The dynamic growth trend continued until the end of 2007.

At the beginning of 2008 a global financial crisis spread from the U.S. onto the global economy. All segments of the world economy were affected, including Foreign Direct Investment. During 2008 a decline in the inflow and outflow of Foreign Direct Investments was noted .

Dakle, kriza se sa globalnog finansijskog tržišta reflektuje na ekonomiju Unije. Kako je prouzrokovana neskladom finansijskog i realnog sektora ekonomije, njene posljedice su se manifestovale u padu agregatne tražnje, usporavanju stopa rasta, deflaciji i rastu nezaposlenosti. Bez obzira na prelijevanje krize sa američkih finansijskih tržišta, Evropska unija i dalje ima bliske odnosa sa SAD kao najvećim spoljnotrgovinskim partnerom sa kojim realizuje ogroman promet roba, usluga i kapitala, koji je na dnevnom nivou znatno veći od milijardu evra. Isto tako, Unija kontinuirano ulaže napore na povećanju učešća u svjetskoj trgovinskoj razmjeni, rastu svih oblika investicija i inovacija, uz poboljšanje preduzetništva i razvoj korporativne društvene odgovornosti.

Nesporno je da je ova razvojna orijentacija garancija bržeg i bezbolnijeg izlaska iz krize i očuvanja postojećih međunarodnih odnosa i sadašnjeg svjetskog poretka.

Evropske zemlje kao i većina svjetskih ekonomija tokom finansijske krize smanjuju investicione aktivnosti, posebno, van svojih granica. Uz ostale, i tim mjerama pokušavaju ublažiti negativne efekte globalne ekonomske krize. Negativan trend velikog pada tokova stranih direktnih investicija se nastavlja i u 2009. godini, u kojoj je i kriza eskalirala. Mnoge svjetske ekonomije su se privremeno zatvorile zbog brige za unutrašnju ekonomsku situaciju. Isto tako, i tokom 2010. godine bilježe se negativni tokovi priliva i odliva stranih direktnih investicija.

Tokom 2011. godine u EU 27 se prvi put nakon 2007. uočava oporavak i rast stranih direktnih investicija. Rast je bio neznatan da bi popravio opšti nivo investicija, imajući u vidu da su strane direktne investicije u 2007. godini bile znatno veće, na strani priliva i odliva. U 2012. godini ponovo padaju tokovi stranih direktnih investicija u odnosu na prethodnu godinu zbog drugog talasa globalne krize i posebne finansijske i fiskalne krize u koju ulaze pojedine članice EU, a, posebno, Grčka.

Tokovi stranih direktnih investicija varijaju iz godine u godinu i povećavaju se u periodima rasta, a

Thus, the crisis of the global financial market is reflected onto the economy of the EU. As the crisis was caused by the mismatch of the financial and real financial sectors, its effects manifested as the decline in aggregate demand, slowing the rate of growth, deflation and rise of unemployment. Regardless of the spillover of the crisis from the U.S. financial markets, the European Union still has close relations with the United States as the largest foreign trade partner with which a vast traffic of goods, services and capital is made, being much higher than EUR 1 billion on a daily basis. Similarly, the EU is continuously making efforts to increase participation in world trade, the growth of all forms of investment and innovation while improving entrepreneurship and the development of corporate social responsibility.

There is no doubt that such development orientation guarantees a faster and painless exit from the crisis and a preservation of existing international relations and the current world order.

European countries, as well as most of the world's economies, reduced their investment activities, especially outside their borders, during the financial crisis. Alongside with the others, they try to utilise such measures to mitigate the negative effects of the global economic crisis. The negative trend of collapsing flows of Foreign Direct Investment continues in year 2009, in which the crisis escalated. Many of the world's economies have been temporarily closed due to concerns for their internal economic situation. Likewise, during the year 2010 the negative cash inflows and outflows of Foreign Direct Investments were recorded.

During the year 2011, for the first time since 2007 a recovery and growth of Foreign Direct Investment is observed in EU 27. The growth was negligible to improve the overall investment level, given that the FDI in 2007 were significantly higher, on the side of the inflow and outflow. The 2012 year was marked by another drop of FDI flows compared to the previous year due to the second wave of the global crisis and special financial and fiscal crisis which included some of the EU members, notably Greece.

FDI flows vary from year to year and increase in periods of growth, while decreasing

smanjuju u periodima recesije. U Evropskoj uniji nakon pada od 60% u 2008. godini, priliv stranih direktnih investicija se oporavlja u 2009. godini za 28%, što je u velikoj mjeri posljedica rasta sopstvenog kapitala i reinvestiranja zarade (Eurostat, 2012).

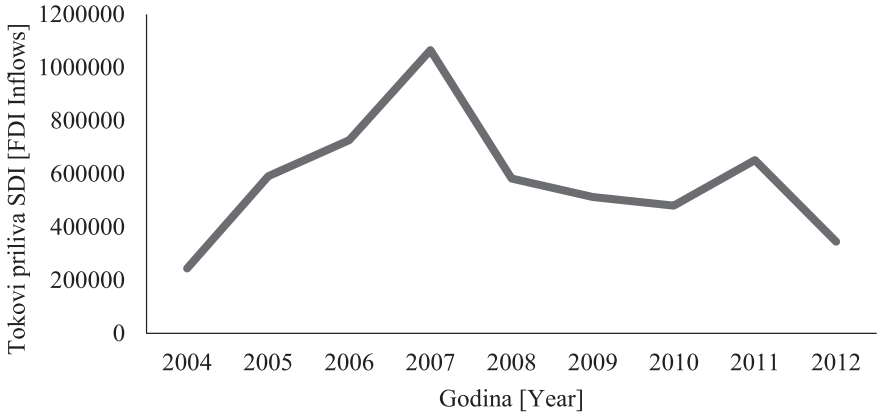
Prilikom prikaza stoka stranih direktnih investicija javlja se problem manjka zvaničnih podataka stoka SDI za 2012. godinu na teritoriji Evropske unije, gdje su joj partneri zemlje iz cijelog svijeta. Pošto postoje baze podataka iz prethodnih godina, vrijednost stoka u 2012. godini dobiće se prosječnom stopom rasta za sve godine unazad do 2004. godine. Za razliku od tokova stranih direktnih investicija koji fluktuiraju, ukupni stok SDI po godinama ne opada, već konstantno raste, što pokazuje da su zemlje EU atraktivne za strana ulaganja.

Sljedeći grafikon prikazuje kretanje toka priliva SDI.

in periods of recession. After the 60% drop in 2008, the Foreign Direct Investment inflow in the EU recovered in 2009 by 28 %, which was largely due to the equity growth and reinvestment of profits (Eurostat, 2012).

When viewing a stock of Foreign Direct Investments, there is a problem of a lack of official FDI stock data in the European Union for year 2012, with its partners being the countries from all over the world. Since there are databases containing data from previous years, the value of the stock in 2012 will be obtained via the average growth rate for all the years back to the 2004. Unlike FDI flows, which fluctuate, the total FDI stock is not declining per year, but growing steadily, indicating that the EU countries are attractive for foreign investments.

The following chart demonstrates the trend of the FDI inflow.



Grafikon 1. Tokovi priliva stranih direktnih investicija (Eurostat, 2012, str. 93)

Chart 1. Foreign Direct Investment Inflows (Eurostat, 2012, p. 93)

Bruto domaći proizvod i rast u Evropskoj uniji

Bruto domaći proizvod i stopa rasta za Evropsku uniju je prikazana za period od 2003. do 2013. godine (EU se od polovine 2013. godine proširila). Očigledno je da posljednje godine posmatranog perioda prati nestabilnost u stopama rasta, što je posljedica uticaja globalne krize i dužničke krize Evrozone. Podaci o GDP i stopama rasta prikazani su u tabeli br. 2.

Gross Domestic Product growth in the European Union

Gross Domestic Product and growth rate in the European Union is presented for the period from 2003 to 2013 (The EU expanded starting from mid 2013). Obviously, the final years of the given period are marked by the growth rate instability which is the result of the global crisis and the eurozone debt crisis. Data on GDP and growth rates are shown in Table 2.

Tabela 2.
GDP i rast u EU u periodu 2003–2015 (Eurostat, 2012)

Table 2.
GDP growth in the EU in the period 2003-2015 (Eurostat, 2012)

Godina [Year]	Realni BDP (u milijardama evra) [Real GDP (in billion EUR)]	Rast (%BDP) Growth (% GDP)
2003	9.664,40	1.5
2004	9.913,20	2.6
2005	10.127,30	2.2
2006	10.467,80	3.4
2007	10.802,70	3.2
2008	10.842,80	0.4
2009	10.354,90	-4.5
2010	10.564,30	2.0
2011	10.740,30	1.7
2012	10.697,70	-0.4
2013	10.696,74	0.0
2014*	10.872,70	1.4
2015*	11.080,30	1.9

Tabela prikazuje vrijednosti i kretanje realnog bruto domaćeg proizvoda od 2003. do 2012. godine za 27 zemalja Evropske unije, dok su za period od polovine 2013. do 2015. godine prikazane prognozirane (projektovane) vrijednosti GDP. Realni bruto domaći proizvod do 2008. godine kontinuirano raste. Pod uticajem ekonomske krize krajem 2008. i početkom 2009. godine dolazi do pada vrijednosti GDP sa 10.842,8 milijardi evra, koliko je iznosio 2008. godine, na 10.354,9 milijardi evra na kraju 2009. godine (Krugman, 2010). Dakle, 2009. godine pada ekonomska aktivnost zbog recesije evropske privrede. Tokom 2010. godine dolazi do neznatnog rasta GDP, ali je stopa ispod nivoa koji je privreda ostvarivala do kraja 2008. godine.

Dužnička kriza Evrozone, a posebno problemi koji se javljaju u Grčkoj, Španiji i Italiji zbog implementacije mjera štednje u javnom sektoru i otežane situacije u ekonomijama najvećih članica Evropske unije, doveli su do pada ukupnog i usporavanja rasta realnog segmenta bruto domaćeg proizvoda. Takođe, u spomenutom kritičnom periodu dolazi do rasta cijena nafte i hrane, dva proizvoda ključna za formiranje cijena važnijih proizvoda i realnih nadnica.

The table shows the values and trends of the real gross domestic product from 2003 to 2012 for the 27 countries of the European Union, while the period from mid 2013 to 2015 contains the forecasted (projected) GDP values. The Real GDP is continuously increasing until 2008. Under the influence of the economic crisis at the end of 2008 and at the beginning of 2009 there was a decline in the GDP value from EUR 10,842.8 billion, to EUR 10,354.9 billion at the end of the 2009 (Krugman, 2010). Thus, the decline in economic activity due to the recession of the European economy occurs in 2009. During 2010, there was a slight growth in GDP, but the growth rate remained below the level achieved by end of 2008.

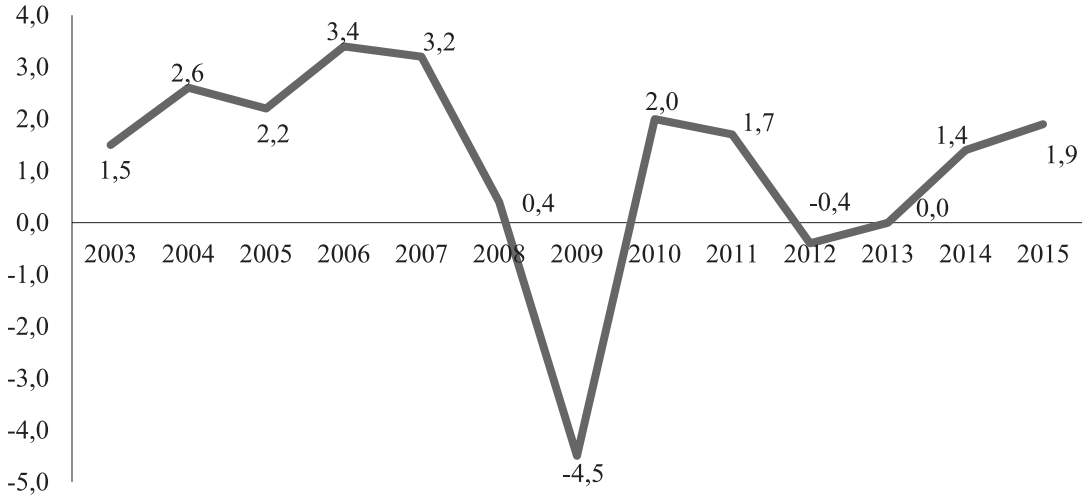
Eurozone debt crisis and particularly the problems arising in Greece, Spain and Italy due to the implementation of austerity measures in the public sector and the difficult situation in the economies of most member states of the European Union, led to a decrease in total and slowing growth in real segment of GDP. Likewise, the above referenced critical period was marked by an increase in oil and food prices, the two products critical for the pricing of major products and real wages.

Od 1.6.2013. godine Evropska unija se širi na 28 članica. U tom periodu se uočava stagnacija rasta i realnog bruto domaćeg proizvoda. Prema procjeni Eurostata , realni GDP u periodu od 2013. do 2015. godine će sporo rasti (u 2014. godini će doći do ozbiljnijeg rasta u odnosu na 2013. godinu, a ohrabrujuća procjena rasta za 2015. godinu ukazuje na dugoročnu stabilizaciju i izlazak iz krize). Ipak, ako se uporedi realni nivo GDP iz 2008. godine i predviđeni za 2014. godinu, može se zaključiti da ekonomija EU još uvijek nije prebrodila ekonomske probleme izazvane aktuelnim krizama.

Prognoze za 2015. godinu su obećavajuće, jer se predviđa rast od skoro 2% u odnosu na prethodnu godinu. Apsolutna vrijednost GDP će prvi put (2014, a zatim i 2015. godine) biti veća od one iz 2008. godine. Kad bi se komparirali samo podaci o GDP 2008. godine sa prognozama za 2015. godinu, moglo bi se zaključiti da je period recesije prošao. Na osnovu promjena bruto domaćeg proizvoda iz tabele 2. izveden je grafikon br. 2.

From 01 June 2013, the EU expanded to 28 member states. During this period, the stagnation of growth and real GDP is registered. According to Eurostat estimates , real GDP in the period from 2013 to 2015 will increase slowly (there will be a more significant growth in 2014 compared to 2013, with a reassuring assessment of growth in 2015 indicates the long-term stabilization and recovery from the crisis). However, if the level of real GDP from the 2008 is compared to the planned GDP for 2014, it can be concluded that the EU economy has not yet overcome the economic problems caused by the current crisis.

Forecasts for the year 2015 are promising, for an increase of nearly 2% over the previous year is expected. The absolute value of GDP will, for the first time (in 2014 and then in 2015) be greater than the one from 2008. If only the data on GDP from 2008 would be compared to the forecasts for 2015, it could be concluded that the period of the recession has passed. Chart 2 has been derived based on the GDP changes from Table 2.



Grafikon 2. Kretanje bruto domaćeg proizvoda (rast u %)

Chart 2. GDP trend (growth in %)

Na grafikonu se uočava da od 2003. do 2006. godine postoji kontinuiran rast. I 2007. godine, pred eskalaciju krize u SAD, stopa rasta od preko 3% bila je za evropske prilike izuzetno visoka. Međutim, 2008. godine stopa rasta dramatično pada na svega 0,4%. Ipak, ona je i dalje pozitivna, iako ekonomija

The chart notes that from 2003 to 2006 there was a continuous growth. Likewise, in 2007, just before the escalation of the crisis in the U.S., the growth rate of over 3% was extremely high for the European standards. However, in 2008 the growth rate drops rapidly to 0.4%. Nevertheless, it was still positive, even though the economy of the European

Evropske unije zbog širenja američke krize već posluje u otežanim okolnostima. Kako se ističe, u 2009. godini dolazi do pada GDP, što je pokazatelj da je privreda Evropske unije već tada u ozbiljnoj ekonomskoj krizi.

Tokom 2009. godine u Evropskoj uniji dolazi do smanjenja odliva, ali i do nešto većeg priliva stranih direktnih investicija, što se, uz ostale faktore, odrazilo pozitivno na rast GDP. U 2010. godini je ostvaren značajan rast.

Međutim, priliv stranih direktnih investicija ne utiče promptno na rast BDP. Može se reći da između aktiviranja investicija i njihovog konačnog stavljanja u funkciju u smislu makroekonomskih rezultata, postoji određeni vremenski pomak. S druge strane, i dužnička kriza koja je zahvatila Evrozonu, a najviše njene članice Grčku, Španiju i Italiju, u 2012. godini je dovela do novih nestabilnosti, što se snažno reflektovalo i na oblast stranih i domaćih investicija.

UTICAJ STRANIH DIREKTNIH INVESTICIJA NA RAST U EVROPSKOJ UNIJI

U ovom dijelu će se pokazati u kakvoj su vezi tokovi priliva SDI i kretanje bruto domaćeg proizvoda, kao osnovne determinante privrednog rasta. Jer, nesporno je da strane direktne investicije imaju pozitivan uticaj na rast bruto domaćeg proizvoda, što predstavlja i polaznu hipotezu ovoga rada.

Kako bi se što bolje prikazao intenzitet i kvalitet uticaja toka priliva stranih direktnih investicija na kretanja bruto domaćeg proizvoda, i druge specifičnosti tog odnosa, koristiće se regresiona i korelaciona analiza.

Korelaciona i regresiona analiza: opšti dio

Promjena jednog obilježja nekog statističkog skupa često ima uticaj na promjenu drugih obilježja zbog međusobne povezanosti. Veza između obilježja može se razlikovati po smjeru i veličini. U funkcionalnoj vezi svakoj vrijednosti jednog obilježja odgovara

Union, due to the expansion of the U.S. crisis was already operating in hampered conditions. As it was stated, in 2009 there was a drop of GDP, which was an indication that the economy of the European Union was in a serious economic crisis at the time.

During 2009, there was a reduction of outflow in the European Union, but also with a somewhat higher inflow of Foreign Direct Investments, which, along with other factors, reflected positively onto GDP growth. In 2010 a significant growth was achieved.

However, the inflow of Foreign Direct Investments does not immediately affect the GDP growth. It can be stated that between the activation of investments and their final putting in the operation in terms of macroeconomic performance, there is a certain time lag. On the other hand, the debt crisis that has engulfed the Eurozone, primarily its member states Greece, Spain and Italy, lead to new instabilities in 2012, which was strongly reflected onto the area of foreign and domestic investments.

INFLUENCE OF FOREIGN DIRECT INVESTMENTS ONTO GROWTH IN THE EUROPEAN UNION

This section shall demonstrate the relationship between FDI inflows and Gross Domestic Product trend, as the main determinant of economic growth, because it is undisputed that FDIs have a positive impact on the growth of GDP, which is the initial hypothesis of this paper.

In order to properly show the intensity and the quality of FDI inflow influence to GDP trends, as well as the other specifics of such relationship, a regression and correlation analysis shall be used.

Correlation and regression analysis: the general part

Change of an attribute of a statistical population often has an impact on changing other characteristics due to the interconnection. The interconnection between the attributes can vary in size and direction. In the functional relation, a value of an attribute corresponds to the value of the oth-

određena vrijednost drugog. Labavije veze su podložne odstupanjima (korelativne, stohastičke veze). Jedna promjenljiva se identifikuje kao nezavisna (*h*), a druga kao zavisno slučajna promenljiva (*y*). U radu nezavisno promjenljivu čine tokovi priliva SDI, a zavisno promjenljiva je GDP. Statističke metode koje proučavaju uzajamne veze statističkih obilježja i pojava (smjer, jačina, oblik) su teorije korelacije. Pokazatelji korelacionih veza su jednačina regresije i koeficijent korelacije. Dakle, ispitivanje zavisnosti u statističkoj analizi ima dva osnovna pravca: oblik zavisnosti koji ispituje regresiona analiza i jačinu zavisnosti koju određuje korelaciona analiza.

Regresiona analiza pokazuje oblik veze dvije promjenljive regresionom linijom. Odnos promjenljivih može biti različit, i zato je prvi korak ka otkrivanju oblika povezanosti dijagram rasturanja, ili dijagram disperzije između dva obilježja. Da bi se kvantifikovala približno linearna veza, može se konstruisati pravac koji najbolje opisuje podatke. To se može učiniti ako je približno jednak broj tačaka iznad pravca i ispod njega. Egzaktan matematički način koji ukazuje na najbolje prilagođen pravac linearne veze je metoda najmanjih kvadrata. Tako određen pravac povezanosti između dvije varijable prikazuje se regresionom linijom. Regresiona linija izražava se jednačinom regresije:

er. Loose connections are subject to deviations (correlative stochastic connections). A variable is identified as an independent (*x*), with the other occurring as a dependent random variable (*y*). In the paper, the independent variable are the FDI inflows, with GDP being the dependant variable. Statistical methods studying the mutual interconnection of statistical features and occurrences (direction, intensity, form) represent the correlation theory. Data correlation indicators are the regression equation and the coefficient of correlation. Therefore, dependency testing in statistical analysis has two main directions: a form of dependency examined by regression analysis and dependence intensity determined by correlation analysis.

Regression analysis shows a form of connection between the two variables by a regression line. The relationship between the variables may be different, and therefore the first step towards discovering the type of dependence is the dispersion diagram between the two features. In order to quantify an approximately linear relationship, a line can be made in order to describe the data in the best manner possible. This can be done if the number of points above the line and below it is approximately the same. The exact mathematical method indicating the direction line best suited to linear relationship is the least squares method. Such defined direction line of correlation between the two variables is shown by a regression line. The regression line is expressed by the regression equation:

$$y=a+b*x$$

gdje su:
y – zavisno promjenljiva,
x – nezavisno promjenljiva,
a – regresiona konstanta,
b – koeficijent regresije.

wherein:
y - dependent variable,
x - independent variable,
a – regression constant,
b - regression coefficient.

Korelaciona analiza pokazuje stepen zavisnosti između zavisnosti promjenljivih, tj. korelacija mjeri jačinu utvrđene povezanosti između dvije promjenljive. Stepen intenziteta povezanosti između promjenljivih koje su u linearnom odnosu mjeri se: kovarijansom kao apsolutnom mjerom intenzitieta korelacije i koeficijentom proste linearne korelacije kao relativnom mje-

The correlation analysis shows the dependence level between the variables, that is, the correlation measures the intensity of the established interconnection between the two variables. The level of interconnection intensity between the variables that are in a linear relation is measured as follows: by a covariance as an absolute measure of correlation intensity and by a coefficient of a simple linear correlation as a relative

rom intenziteta korelativne mjere.

Najprihvatljivija mjera je koeficijent proste linearne korelacije ili Pirsonov koeficijent koji se može izračunati pomoću sljedeće formule:

measure of intensity of the correlative measure.

The most acceptable measure is the simple linear correlation coefficient or Pearson coefficient, which can be calculated using the following formula:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - \sum x^2} * \sqrt{n\sum y^2 - \sum y2}}$$

Poslije izračunavanja Pirsonovog koeficijenta neophodno je primjeniti skalu za tumačenje koeficijenta korelacije[3].

After calculating the Pearson coefficient, it is necessary to apply the scale to interpret the correlation coefficient[3].

Korelaciona i regresiona analiza na primjeru Evropske unije

Kako bi se utvrdio oblik i jačina zavisnosti između rasta GDP i toka priliva SDI, mogu se uzeti već pomenute vrijednosti bruto domaćeg proizvoda i toka priliva SDI u Evropskoj uniji za period od 2004. do 2012. godine. Potrebno je formirati i uporednu tabelu sa prikazom apsolutnih vrijednosti obje varijable u posmatranom periodu.

Correlation and regression analysis on the example of the European Union

In order to determine the shape and intensity of dependency between the GDP growth and the FDI inflow, the above mentioned values of Gross Domestic Product and the FDI inflow in the European Union for the period from 2004 to 2012 can be used. It is necessary to establish a comparative table showing the absolute values of both variables in the given period.

Tabela 4
Uporedni prikaz GDP i toka priliva SDI

Table 4
Comparative review of GDP and the FDI Inflow

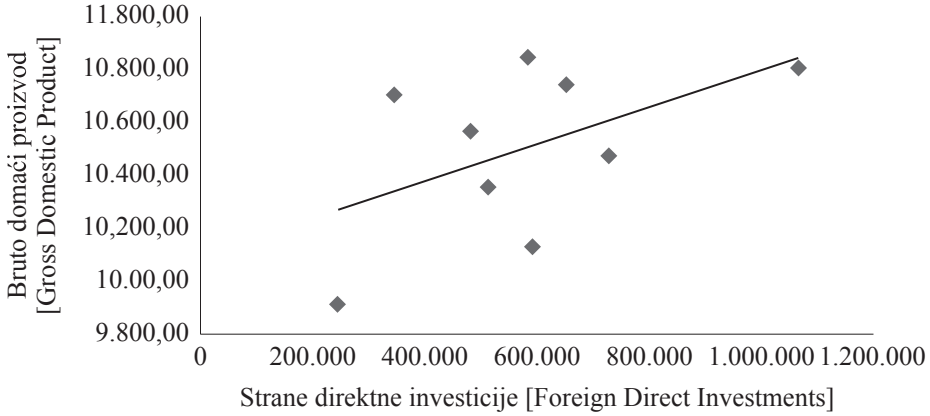
Godina [Year]	Prilivi SDI [Inflows FDI]	Vrijednost BDP [Value GDP]
2004	244.179	9.913,20
2005	591.234	10.127,30
2006	726.462	10.467,80
2007	1.065.473	10.802,70
2008	582.517	10.842,80
2009	512.626	10.354,90
2010	480.892	10.564,30
2011	652.062	10.740,30
2012	345.096	10.697,70

3 За коефицијент корелације r који има вриједност -1<r<-0,8 ради се о јакој негативној корелационој вези; за -0,8<r<-0,6 ради се о средње негативној вези; за -0,6<r<-0,3, ради се о слабој негативној вези; за -0,3<r<0,3, постоји занемарљива корелациона веза; за 0,3<r<0,6 слаба позитивна веза; за 0,6<r< 0,8 ријеч је о средње позитивној вези; и за 0,8<r<1 постоји јака позитивна веза.

3 For the correlation coefficient r, which has a value of -1<r<-0.8 it is an intensive negative correlation; for -0.8<r<-0.6 it is an average negative correlation; for -0.6<r<-0.3, it is a weak negative correlation; for -0.3 <r < 0.3, it is a negligible correlation; for 0.3<r<0.6 it is a weak positive correlation; for 0.6<r< 0.8 it is a medium positive correlation; and 0.8<r<1 there is a strong positive correlation

Na osnovu podataka iz prethodne tabele formira se dijagram raspršenosti. Takođe, pomoću funkcija u Excelu moguće je dobiti i liniju regresije.

Based on the data from the previous table, a scatter diagram is formed. Likewise, by using functions in Excel, it is possible to obtain the regression line.



Grafikon 3. Linija regresije

Chart 3. Regression line

Iz prezentovanih podataka se dolazi do zaključka da ucrtane tačke koje aproksimuju regresionu liniju pokazuju težnju ka rastu, i to pozitivnom. Ovo znači da rast toka priliva stranih direktnih investicija prati rast bruto domaćeg proizvoda. Ovim se konstatuje osnovna svrha regresione analize - oblik zavisnosti između rasta GDP i toka priliva SDI.

Korelaciona analiza će utvrditi jačinu zavisnosti među varijablama. Koeficijent korelacione analize izračunaće se Pirsonovom formulom.

Prvo se izvodi ukupan koeficijent korelacije za period od 2004. do 2012. godine. Ukupni koeficijent korelacije iznosi r=0,183. Dakle, u posmatranom periodu postoji zanemarljiva pozitivna korelacija. Ovo je period velikih ekonomskih turbulencija i promjena, što je jedan od uzroka niske korelacije među posmatranim varijablama.

Međutim, ukoliko se posmatrani vremenski period podijeli na dva subperioda, i to prvi do pojave recesije (od 2004. do početka 2008. godine) i subperiod od 2009. do 2012. godine, dobiće se potpuno drugačiji koeficijenti korelacije.

Koeficijent korelacije za period 2004 - 2007. godina iznosi r_1=0,992, što znači da u ovom subperiodu postoji jaka pozitivna ko-

From the data presented it can be concluded that the marked points that approximate the regression line shows the tendency towards a positive increase. This means that an increase in the FDI inflow is followed by a growth of GDP. This concludes the main purpose of regression analysis - a form of dependence between the growth of GDP and the FDI inflow.

Correlation analysis shall determine the intensity of dependence between the variables. The correlation analysis coefficient shall be calculated by the Pearson formula.

Firstly the overall correlation coefficient is derived for the period from 2004 to 2012. The overall correlation coefficient is r=0.183. Therefore, in the given period there is a negligible positive correlation. This is a period of great economic turbulences and changes, which is one of the reasons for the low correlation between the variables observed.

However, if the given time period is divided into two sub-periods, i.e. the first sub-period lasting until the recession (from 2004 to the beginning of 2008), and the second sub-period starting from 2009 to 2012, a completely different correlation coefficients shall be shown.

The correlation coefficient for the period 2004 - 2007 is r_1=0.992, which means that there is a strong positive correlation between

relacija između toka priliva SDI i rasta bruto domaćeg proizvoda.

Ako se posebno posmatra period 2009-2012. godina, koeficijent korelacije iznosi r_2=-0,237. Ovaj koeficijent nam pokazuje da postoji negativna, ali zanemarljiva korelaciona veza između posmatranih varijabli.

Rezultati korelacione i regresione analize ukazuju da između posmatranih pojava za čitav posmatrani period postoji zanemarljiva pozitivna korelacija. U prvom stabilnijem subperiodu zabilježena je jaka pozitivna korelacija, dok je drugi, znatno nestabilniji subperiod karakterističan po zanemarljivoj negativnoj korelaciji.

ZAKLJUČAK

Investicije predstavljaju značajan faktor podsticaja ekonomskog rasta i razvoja za svaku zemlju. Pri tome nije primarno jesu li investicije unutrašnjeg ili spoljnjeg porijekla, posebno za otvorene ekonomije kakve su svakako privrede zemalja članica Evropske unije.

Smatra se da su strane direktne investicije kao konstituent ukupnih investicija značajnije, pa time i poželjnije od internih investicija jer donose i brojne druge prednosti. Polazna hipoteza ovog rada se odnosi na dokazivanje korelativne veze između kretanja stranih direktnih investicija i rasta društvenog proizvoda.

Kako je za ukupno posmatrani period utvrđena zanemarljiva i pozitivna korelacija, može se konstatovati da je u određenoj mjeri dokazana hipoteza da strane direktne investicije imaju određeni uticaj na rast u Evropskoj uniji. Tačnije, pozitivna korelacija ukazuje na određeni, ali ne značajan ili veliki doprinos stranih direktnih investicija privrednom rastu.

Međutim, analize po subperiodima dodatno potvrđuju postavljenu hipotezu, jer je u ekonomski stabilnom subperiodu ostvarena jaka i pozitivna korelativna veza, što je potvrdilo hipotezu o značajnom doprinosu stranih direktnih investicija rastu u Evropskoj uniji. Suprotno, u nestabilnom subperiodu zabilježena je negativna i zanemarljiva korelaciona veza između stranih direktnih investicija i rasta GDP/BDP.

the FDI inflow and GDP growth in the given sub-period.

If the period from 2009 to 2012 is observed specifically, the correlation coefficient is r_2=-0.237. This ratio indicates that there is a negative but an insignificant correlation between the variables observed.

The results of correlation and regression analysis indicate that there is a negligible positive correlation among the observed occurrences within the entire observed period. A strong positive correlation was observed in the first stable sub-period, while the second, significantly less stable sub-period is characterized by a negligible negative correlation.

CONCLUSION

The investments represent an important incentive factor for economic growth and development of any country. Wherein it is not essential whether the investments are of internal or external origin, especially for open economies such as the economies of the European Union.

It is believed that Foreign Direct Investments are a major constituent of the total investment, therefore being more desirable than internal investments since they bring other numerous benefits as well. The initial hypothesis of this paper refers to demonstrating correlations between FDI trends and GDP growth.

Since for the total observed period an insignificant and positive correlation was established, it can be concluded that the hypothesis of FDI having some impact on the EU growth, has been proven to a certain extent. To be more specific, a positive correlation indicates a certain, but not a significant or major contribution of FDI to the economic growth.

However, the analyses by sub-periods additionally confirm the hypothesis, for a strong positive correlation was generated in an economically stable sub-period, confirming the hypothesis of a significant contribution of FDI to the EU growth. In contrast, a negative and insignificant correlation between Foreign Direct Investments and GDP growth was recorded during the unstable sub-period.

Na ovaj način su kompletirani relevantni zaključci o kretanju stranih direktnih investicija i bruto domaćeg proizvoda Evropske unije u različitim unutrašnjim i eksternim (globalnim) okolnostima. Međusobne veze i tendencije u kretanju ovih makroekonomskih agregata, koeficijenata i pokazatelja su identične sa ključnim makroekonomskim teorijama, ali i relevantnom ekonomskom praksom.

In this manner, the relevant conclusions on the Foreign Direct Investment trend and Gross Domestic Product of the European Union in a variety of internal and external (global) circumstances, have been reached. The interconnections and tendencies of movements of such macroeconomic aggregates, coefficients and indicators are identical to the key macroeconomic theories, but also to the relevant economic practices.

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