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The Impact of Foreign Capital on the Country Economy

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Abstract: An influence effect of penetration of foreign direct investments (FDI) is not clear for economy of a home country. There are quantitative and qualitative indicators measuring the role of foreign direct investments: macro economical indicator characterizes an ability of a country to attract FDI; and micro economical indicator characterizes how transnational the country is. The effects for countries exporters and importers of capital are being discovered through the effects of issues (employment, competition), surplus and rent payments. To measure out the investment effect is possible within portfolio theory.

It is offered to modify the criteria accepted for factories to measure out macro economical effectiveness of foreign investment. Figuring out the macro economical effects assumes an analysis of foreign capital inflow on the size of GDP, level of export / import and employment. Due to help of Pierson's correlation coefficient it was found out that there is a connection between these indicators without a temporal log at first and then with a temporal log in Russia, Hungary and China.

We chose Hungary as it was the first country of Eastern Europe to attract the foreign capital; China as a country attracting the largest volume of FDI among the emerging markets countries. On a base of statistical materials of central banks in Russia, Hungary and China tables arranged and graphs were imaged. They help to make a conclusion that the inflow of foreign capital in home country is not absolutely positive. It leads to another conclusion: the national investors must be stimulated.
Keywords: foreign direct investments; home countries; investment policy; correlation coefficient; effect valuation; temporal log

Investment statistics of several countries, international organizations reports as well as a number of scientific publications analysis enables us to single out some showings which measure the impact of foreign direct investment (FDI). Namely, there are the total volume of attracted foreign direct investment; the volume of attracted foreign direct investment per head; FDI/national investment ratio; annual (average annual) growth; the share of foreign direct investment in GDP; the share of foreign direct investment (companies) in production, total profits, importing country tax revenue; project average cost; minimum amount of investment (in China).

During the period from 1995 to 2003 most of FDI, of both exporters and importers, accounted for developed countries. Companies from EC countries turned into major FDI owners (about $ 3.4 trillion in

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2002) what is more than twice as much as USA ($1,5 trillion). In 2003 the global FDI was declining (three years running) and came to $ 560 billion owing to 25 % slump in FDI influx in developed countries as compared to 2002 ($367 billion). 111 countries saw FDI flow growth while the decrease took place in 82 nations. Especially sharp drop (by 53 %) in FDI influx was seen by USA and the figure made up $30 billion – the lowest value of late 12 years. In CEEC countries FDI influx fell from $31 to 21 billion. Developing countries saw 9 % FDI growth and came to $172 billion a year while accumulated FDI volume ran up to about 30 % of GDP, having increased from 13 % in 1980.

Operating with international statistics we can calculate FDI volume indexes. (FDI – development policy; national and international issues, 2003)

a) Macroeconomic – the ability of country to attract FDI, that is revelation of compliance of country's share in global FDI with its economic state, in particular, expressed with three ratios of country's share in global FDI to its share in:

GDP,

employment,

export.

b) Microeconomic – transnational ratio – average value of three figures:

the ratio of foreign assets to the total assets volume,

abroad sales to the total sales volume,

staff number abroad to the total employed number.

Modern Scandinavian economic school representatives distinguish three types of effects for both capital exporting and capital importing countries: (Hoekman B., Saggi K., 2001)

Output,

employment,

competition.

Surplus.

Rent.

1. For the *exporting* countries the problem of loss of jobs caused by FDI influx is extremely controversial meaning that the capital is being exported but the labor force remains. FDI export can lead to native employment pattern change: the employment rate of low-skilled workers will fall while concerning high-skilled workers this figure will increase as in the homeland scientific activities are being carried out and there is a possibility to create office, managerial and engineering jobs. It's highly likely that new jobs wouldn't be created at all because of the competition with foreign companies. The transfer of the part of the production process abroad increases company's gross yield and competitiveness and even strengthens the parent company.

For the *importing* countries the total effect of FDI on their employment rate is also vague. On the one hand, imported workforce contributes to net domestic employment rate growth; and if there is unemployment in the country-recipient, such situation becomes beneficial for its economy. However, firstly, employment rate growth caused by FDI can put pressure upon native labor-market through wages growth effect. No doubt, this effect is favorable for employees of companies that attract FDI, yet cost escalation in labor remuneration causes decrease in purchasing capacity of another part of population. Secondly, FDI influx in the form of mergers and takeovers is often accompanied with employed number reduction in the country-recipient. Thus, for output effect to ensure country development and its common wealth growth, two terms should be met: firstly, additional employment shouldn't induce the reduction in real income of population; secondly, FDI influx should provide the most favorable workforce use.

With foreign companies emerging the competition becomes more severe what can lead to deterioration of national producers on the domestic market of the country-recipient.

2. For the *exporting* countries the surplus effect is expressed with steady concentration on R&D, new knowledge acquisition, methods and directions of work organization and other skills that spur the production process intensification.

The positive impact of FDI on the *importing* country is relative surplus of work and cash flows; new acquired foreign technologies, management strategies or knowledge of higher quality can enable local companies to modernize their technologies. The surplus can be both direct (from firm to firm) and indirect (through other markets: labor, etc.). FDI can reduce the technological gap. Buying of half-finished products by foreign firm from local suppliers is likely to spur the rise in make quantity, higher productivity and national industry modernization. If a foreign company supplies new or more quality productions, both national producers and consumers will benefit from this situation. Thus, both countries will be developing.

3. For the *exporting* countries the rent effect concerns the profit share that will be left in the home country. This effect is also not always positive. It's well known that companies of some countries transfer their property to other countries, so the bulk of tax proceeds come to the foreign country.

For the FDI *importing* countries the presence of foreign ownership can lead to capital outflow in the form of rent and other outgoings. As rent is the investment income of foreigners its outflow should be taken into consideration. On the other hand, if foreign investors have special benefits (understated rent) the rent transfer lowers the benefits of the recipient country and violates mutually beneficial nature of the transaction.

Investment effect evaluation can also be carried out within the framework of the portfolio theory where two competing approaches were distinguished in the second half of the last century:

eastern (the Russian school), based on operating economies and

western (European and American approaches) based on investment effect evaluation from certain project realization. Nevertheless, the correlation of the two approaches is clear: operating economies always increase the profit margin and profit earning doesn't exclude its augmentation owing to operating economies.

World experience (UNIDO standards, World bank) testifies the fact that during project design commercial, technical, financial, institutional and economical feasibility analysis is necessary.

In short, project *commercial* feasibility analysis envisages competition environment analysis. *Technical* analysis of the investment project sets task to find out the most appropriate technologies, resources availability and cost. Project *financial* analysis is a calculation and interpretation of liquidity and solvency ratios, company profitability and management efficiency. Project *financial* analysis is the calculation and interpretation of the liquidity and solvency ratios, company profitability and management efficiency. *Institutional* analysis evaluates the whole of internal and external factors: organizational, legal, political and administrative situation. Finally, *economical* analysis (what, in fact, is our interest) includes the evaluation of project contribution to the country development, realization of its objectives.

As it is well known, for the project investment economical efficiency evaluation on the **micro**economic level international and Russian experts mostly use the following interrelated criteria: net present value (NPV), profitability index (PI), Benefits to Costs Ratio, Internal Rate of Return.

For the **macro**economic efficiency evaluation of FDI we suggest the same criteria that are customary for a company. We just need to make some modification. From the direction of society the growth of production volume (GDP), reduction of production unit costs, decrease in delivery and storing costs and product improving could be their real benefit.[2] Here we should take into consideration the fact that for the society, which is considered to be the country resources owner and the recipient of all the benefits

[2] The effect of agricultural products processing transfer from specialized region processing plants directly to the farms in respect to the society lies in transportation costs reduction, i.e. finished product transportation is cheaper than raw material transportation, and processing companies' capacity utilization decrease as well. Here quality improvement and costs reduction are not guaranteed. Competition could be the indirect effect of such a project, however, forming of competitive environment like this is rather expensive.

from project realization, the total growth of benefits should exceed the growth of costs taking into account possible alternative resources involved into the project. The most significant effects when evaluating the investment are: the change in jobs number in a region; improvement of workers' housing, cultural, living and working conditions; the change of operative personnel structure (the number of employed holding positions demanding higher or special education), standards of education (the number of workers subject to training, retraining and skill level raising), other development showings.

Let's calculate macroeconomic effects, i.e. analyze the impact of foreign capital influx on GDP value (country "value" criterion), export/import volume and employment rate. First, we will evaluate the impact without taking time gap into account, i.e. suppose that the impact of foreign investment attracting for the recipient country – small open economy – comes at once. However, since this situation is unlikely to take place we should conduct the evaluation with regard to the time gap between FDI influx and the result (the change in GDP value, export/import volume and employment rate) by the example of Russia, Hungary and China. In order to do so, let's determine the type and closeness of correlation between foreign direct investment and

population mean income,

export/import volume,

unemployment rate and

GDP.

using Pirson's correlation coefficient (formula 1) and the data of the Federal state statistics service (table 1, 2) about the volume of foreign investment attracted to Russia, population mean income, export/import volume and unemployment rate.

$$r_{xy} = \frac{\frac{1}{n}\sum_{i=1}^{n} x_i \cdot y_i + \frac{1}{n}\sum_{i=1}^{n} x_i \cdot \frac{1}{n}\sum_{i=1}^{n} y_i}{\sqrt{\frac{1}{n}\sum_{i=1}^{n} x_i^2 - \left(\frac{1}{n}\sum_{i=1}^{n} x_i\right)^2} \cdot \sqrt{\frac{1}{n}\sum_{i=1}^{n} y_i^2 - \left(\frac{1}{n}\sum_{i=1}^{n} y_i\right)^2}},$$

Formula 1. Pirson's correlation coefficient

where x_{i}- the volume of attracted foreign direct investment,

y_{i} - dependent variables, in our case mean income value, export/import volume, unemployment rate and GDP value, where:

FDI – foreign direct investment (FDI) volume, in terms of $ billion

GDP– gross domestic product, in terms of $ billion

XP – export, in terms of $ billion

IM – import, in terms of $ billion

UNP – unemployment rate, (%)

Interdependence correlation coefficient between foreign direct investment and:

Average per capita population income equals – 0,0438,

Unemployment rate equals – 0,0999,

GDP equals – 0,0291.

«–» sign indicates the inverse negative relationship between analyzed characteristics while «+» sign indicates the direct relation. As in all the cases correlation coefficient tends to zero (<0,1) we could draw a conclusion that there is no linear dependence between present showings and foreign direct investment.

The absence of interdependence between the volume of investment attracted to Russia and calculated showings is indicated visually in the following figures (1-4).

It's possible that the absence of interdependence between FDI influx and analyzed national measures is the result of negligibly small amount of FDI attracted to Russia. In our opinion, to test this assumption we should follow the experience of the countries-small open economies, which were leading in FDI attraction. And it's desirable to take non-developed countries. As we know that at that time Hungary took the first place in investment attraction among CEEC countries (tab.3) and China – among South-East Asia nations (tab.4) let's make detailed calculations and graphs for these countries. Since we didn't manage to find the information about population mean income for the period of 1992-2002 in these countries we would use export/import showings what corresponds to UNCTAD practice.

Correlation coefficient between foreign direct investment in Hungary and:

export volume equals 0.0840,

import volume equals – 0.0422,

Unemployment rate equals – 0.0481,

GDP equals – 0.0594.

Correlation coefficient between foreign direct investment in Hungary and:

export volume equals 0.3661,

import volume equals – 0.3650,

Unemployment rate equals – 0.4938,

GDP equals – 0.3746.

Let's also make a graphical interpretation of the information on Chinese economy.

According to regression and correlation analysis theory we can only talk about the interdependence when the coefficient value lies in the range from 0.7 to 1.0. If the range is from 0.4 to 0.7 the dependence is small and if the coefficient value is less than 0.4 – there is no dependence at all. In our calculations only in China the dependence slightly exceeded the threshold of 0.4.

In accordance with the adopted approach which consists in using the project investment analysis method for the evaluation of FDI impact on the small economy development we should take time gap into account. It's clear that we can't obtain a result at once, i.e. in 1992 we can't gain effect from the investment put up in the same year. Therefore, we have calculated the dependence of GDP, export/import volume and unemployment rate on FDI taking the time gap into account. The purpose of the research was to find out whether the time gap corresponded to a seven-year grace period given by the legislation of most of the world countries to investment projects. In Russia the correlation with the time gap was discovered in 2 and 3 years only concerning export; all other showings were below 0.7. And since the 4-th year almost all the showings have demonstrated negative correlation coefficient. In Hungary, the correlation by GDP was seen in the 7-th and 9-th years (in 8-th there wasn't), by export/import – in the 8-th year. There was no correlation between FDI and unemployment rate. In China since the 6-th year the correlation was seen only by GDP (Appendix 1).

Nevertheless, we think that foregoing calculations don't give the ground to draw a conclusion about the total lack of FDI impact on the economy of the recipient country. But we can undoubtedly talk about the lack of the dependency between the volume of the attracted foreign direct investment and the examined national measures. The conducted research proves that for the elaboration of foreign direct investment attraction policy we need to make the predesign of the FDI effect (quantitative and qualitative). Our calculations also have revealed that seven-year grace period adopted in many countries is not always warranted.

There are small counties which are heavily dependant on FDI. Belgium and Ireland belonging to the European Community (EC); Argentina, Chile, Venezuela (MERCOSUR); Malaysia, Singapore

(ASEAN) depend heavily on the foreign direct investment. At the end of the nineties, Hungary, Bolivia and Sweden were the most dependent on the foreign investment. In these countries an economic progress was up to the foreign direct investment almost to the same extent as to the national investment.

Why do attracted FDI volumes differ from country to country? Why do the effects of FDI differ? What are the reasons for such differences? Why do some countries succeed in this activity and others don't?

Perhaps the answers to these questions are as follows:

countries have different objectives and use different strategies,

the objectives of the recipient country and transnational corporations as FDI bearers don't concur,

it's necessary to take into account ethnic and cultural business traditions,

recipient countries entered the international capital market in different times (some were earlier, others-later).

As for FDI impact on other showings and activities of the recipient country – small open economy, in general there are both positive and negative effects of FDI. The completion phase of the research should be the evaluation of the positive and negative effects of FDI attraction for the small open economy development.

Certainly, there are many examples of both positive and negative FDI impact on small countries development.

Appendix 1

National measures correlation

(with the time gap)

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TABLES AND FIGURES

(See next page)

Table 1: National measures of the Russian economy (1994-2003)

Years	GDP, $billion	Export volume $billion	Import volume $billion	Unemployment rate %	FDI, $billion
1994	254,46	67,38	50,45	7,40	0,40
1995	373,00	82,42	62,60	8,50	1,50
1996	419,90	89,69	68,09	9,60	1,70
1997	430,31	86,90	71,98	10,80	1,70
1998	290,06	74,44	58,02	11,80	1,50
1999	186,35	75,55	39,54	12,90	1,30
2000	264,76	105,03	44,86	10,60	4,42
2001	307,46	101,88	53,76	9,10	3,98
2002	350,66	107,30	60,97	8,00	4,00
2003	434,4428	163,60	84,50	8,60	

Table 2: National measures of the Russian economy (1994-2002)[3]

Years	Average per capita population income (rubles a month)	GDP (billion rubles)	Rate of $ to ruble	Average per capita population income ($ a year)
1	3	5	6	7=3:6
1994	206,3	610,7	2,4	85,96
1995	515,5	1540,5	4,13	124,82
1996	770.0	2145,7	5,11	150,68
1997	942,1	2478,6	5,76	163,56
1998	1012.0	2741,1	9,45	107,09
1999	1658,9	4766,8	25,58	64,85
2000	2281,2	7302,2	27,58	82,71
2001	3060,5	9040,8	29,41	104,09
2002	3887.0	10863,4	30,98	125,47

[3] Source: author's calculations based on data of the RF Federal state statistics service, the rate of exchange is taken

Table 3: Main national measures of Hungary, 1992-2003[4]

Years	GDP, $billion	Export volume $billion	Import volume $billion	Unemployment rate %	FDI, $billion
1990	58,81	9,60	8,67	1,70	0,31
1991	61,10	10,48	11,73	8,50	1,47
1992	61,25	10,68	11,11	9,80	1,48
1993	61,70	8,89	12,52	11,90	2,45
1994	65,00	10,69	14,38	10,70	1,14
1995	82,83	12,44	15,05	10,20	5,17
1996	101,61	12,65	15,86	9,90	2,38
1997	126,01	18,61	20,65	8,70	2,24
1998	132,44	22,96	25,60	7,80	2,08
1999	138,00	26,33	29,42	7,00	2,04
2000	145,17	34,22	38,98	6,40	1,69
2001	150,69	38,10	42,01	5,70	2,60
2002	155,66	40,92	44,68	5,80	0,86
2003	147,70	45,46	48, 89,	5,90	0.25

Table 4: Main national measures of China (1990 – 2003)

Years	GDP, $billion	Export volume $billion	Import volume $billion	Unemployment rate %	FDI, $billion
1990	370,00	62,25	53,57	2,5	32,36
1991	379,00	71,90	63,80	2,3	6,60
1992	436,00	84,77	80,39	2,3	11,98
1993	571,98	91,34	103,44	2,6	58,12
1994	527,27	121,02	115,69	2,8	111,44
1995	711,44	148,80	129,11	2,9	82,68
1996	834,73	151,19	138,94	3	91,28
1997	917,68	182,88	142,19	3	73,28
1998	947,29	183,59	140,31	3,1	51,00
1999	1024,64	216,41	213,16	3,1	52,10
2000	1101,99	249,24	225,12	3,1	41,22
2001	1179,35	266,64	243,60	3,6	62,38
2002	1256,70	325,68	295,32	4	69,19
2003	1334,05	438,48	413,04	4,1	82,77

as average annual rate of the Bank of Russia.

[4] Source: author's calculations based on data of the Bank of Hungary.

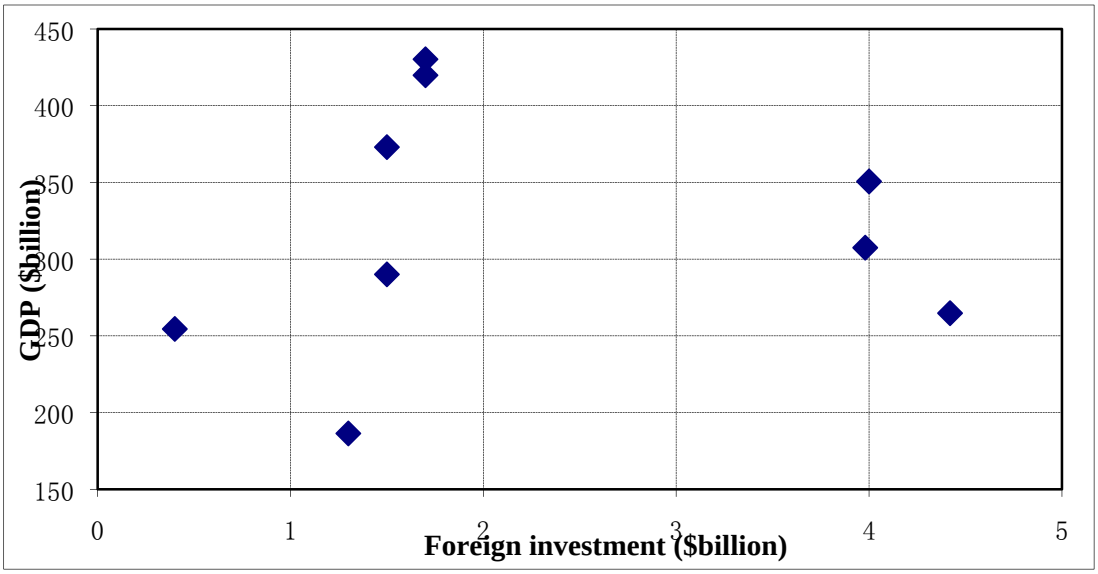

Figure 1: The dependence of GDP value on the volume of foreign investment attracted to Russia.

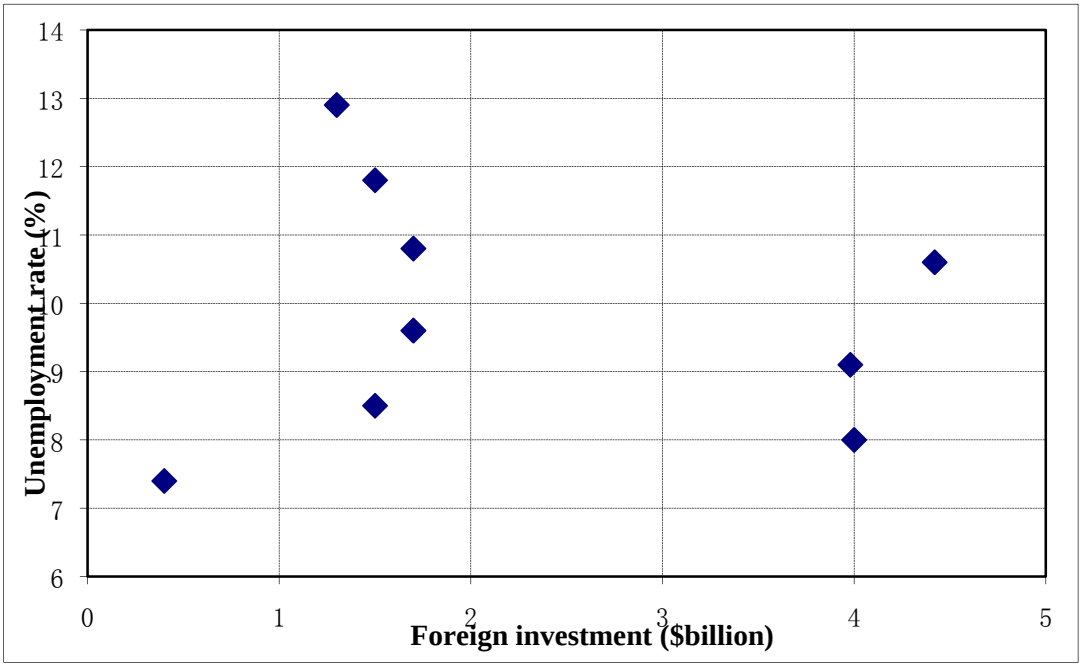

Figure 2: The dependence of unemployment rate on the volume of attracted foreign investment.

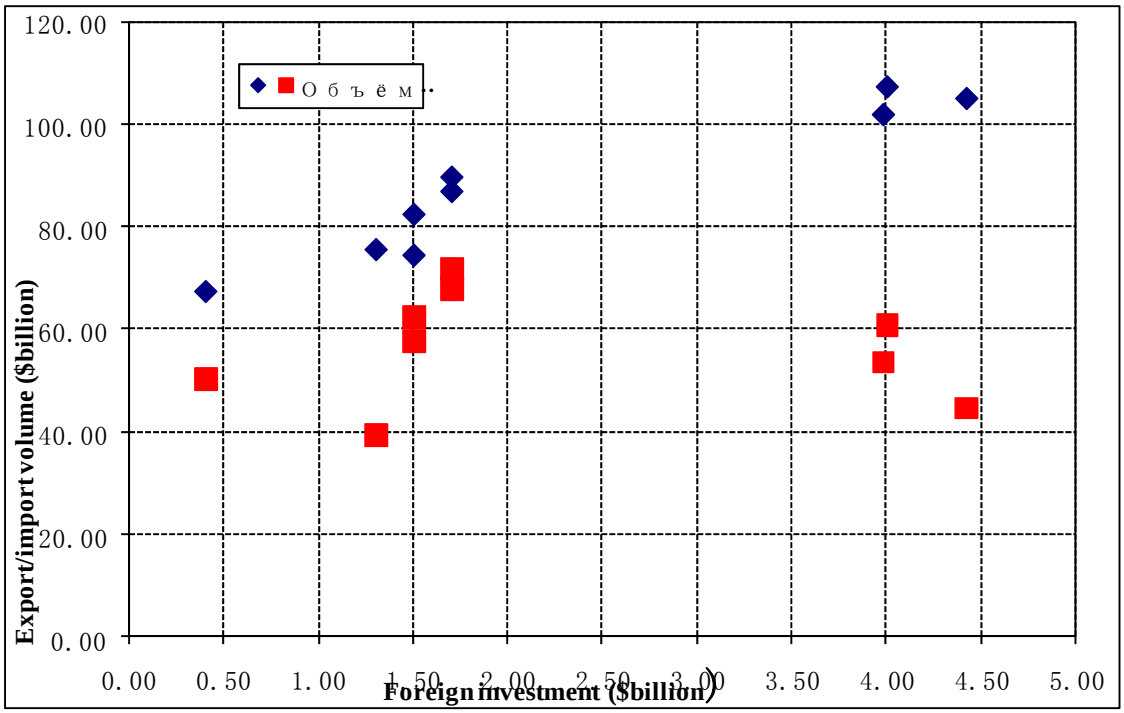

Figure 3: The dependence of export/import volume on the volume of foreign investment attracted to Russia

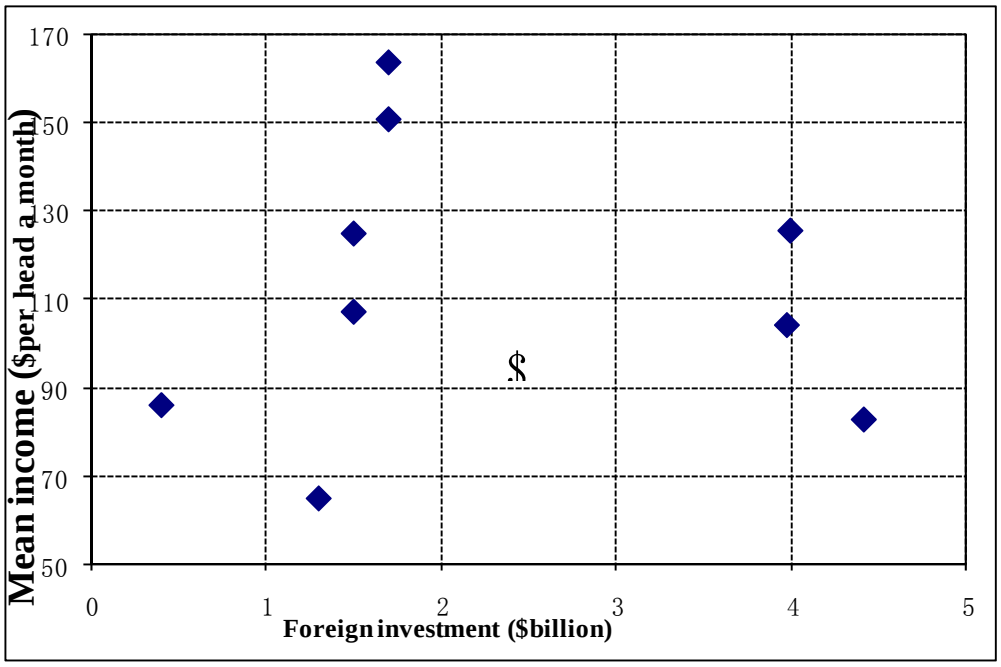

Figure 4: The dependence of population mean income on the volume of foreign investment attracted to Russia.

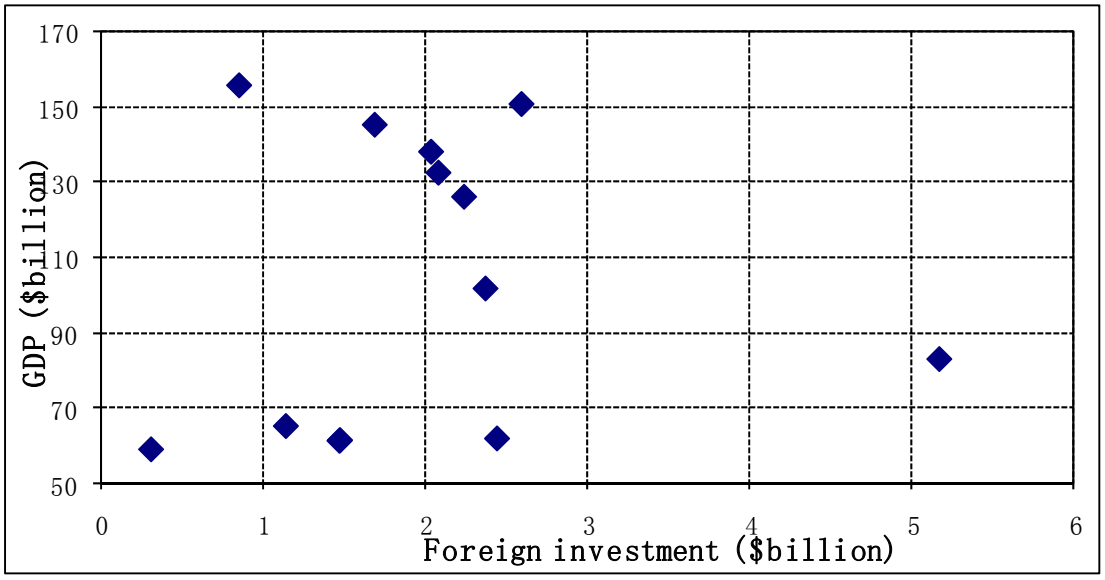

Figure 5: The dependence of GDP value on the volume of foreign direct investment in Hungary

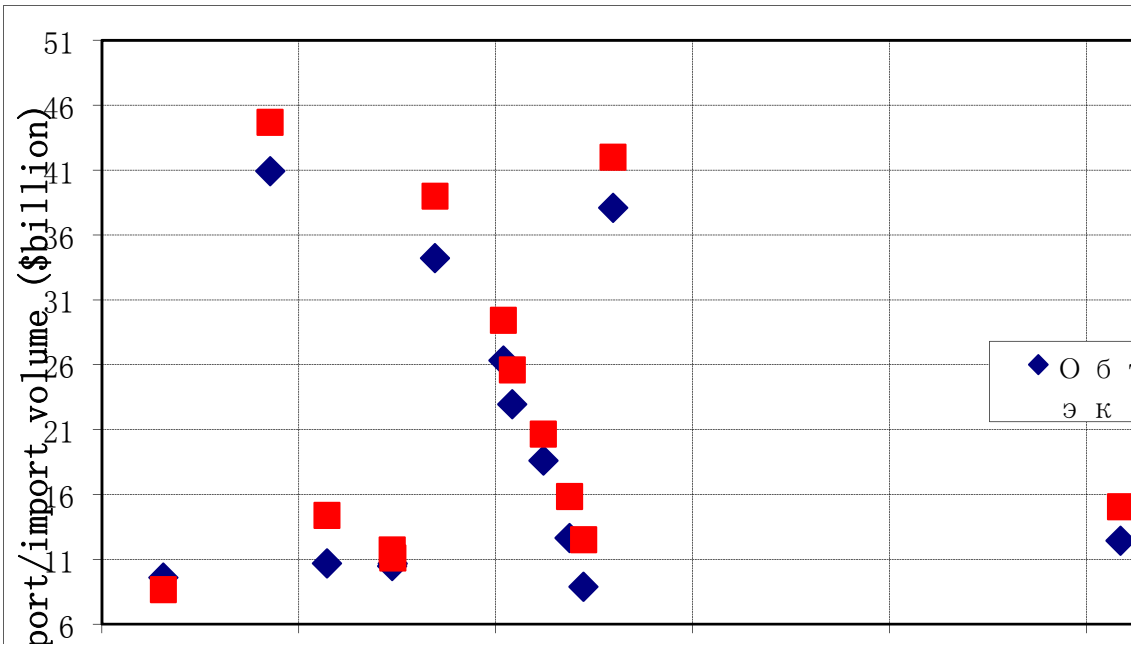

Figure 6: The dependence of export/import volume on the volume of foreign direct investment in Hungary

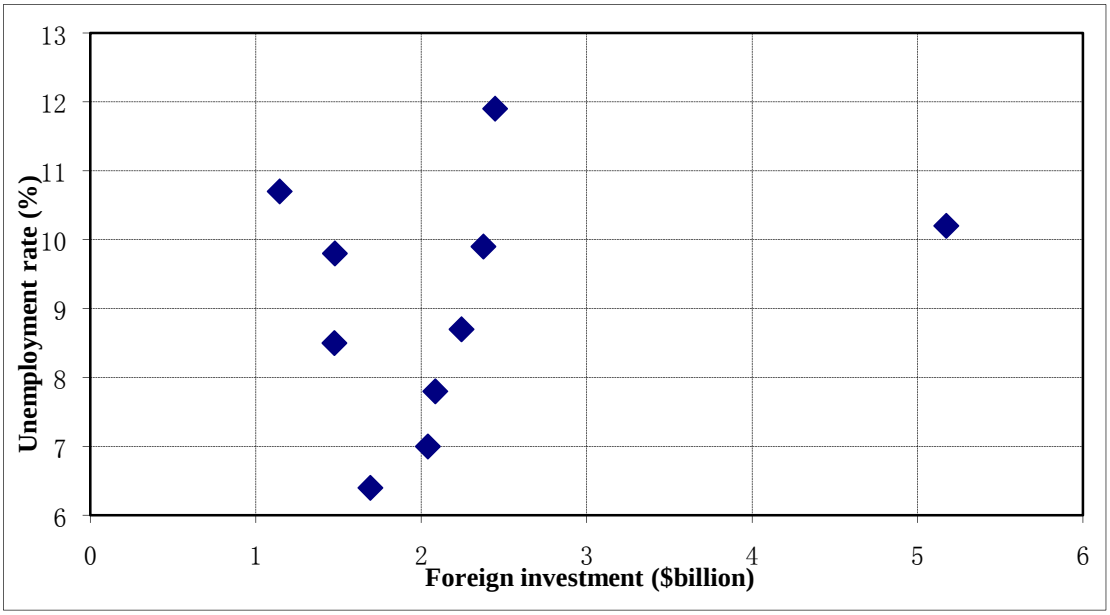

Figure 7: The dependence of unemployment rate on the volume of foreign direct investment in Hungary

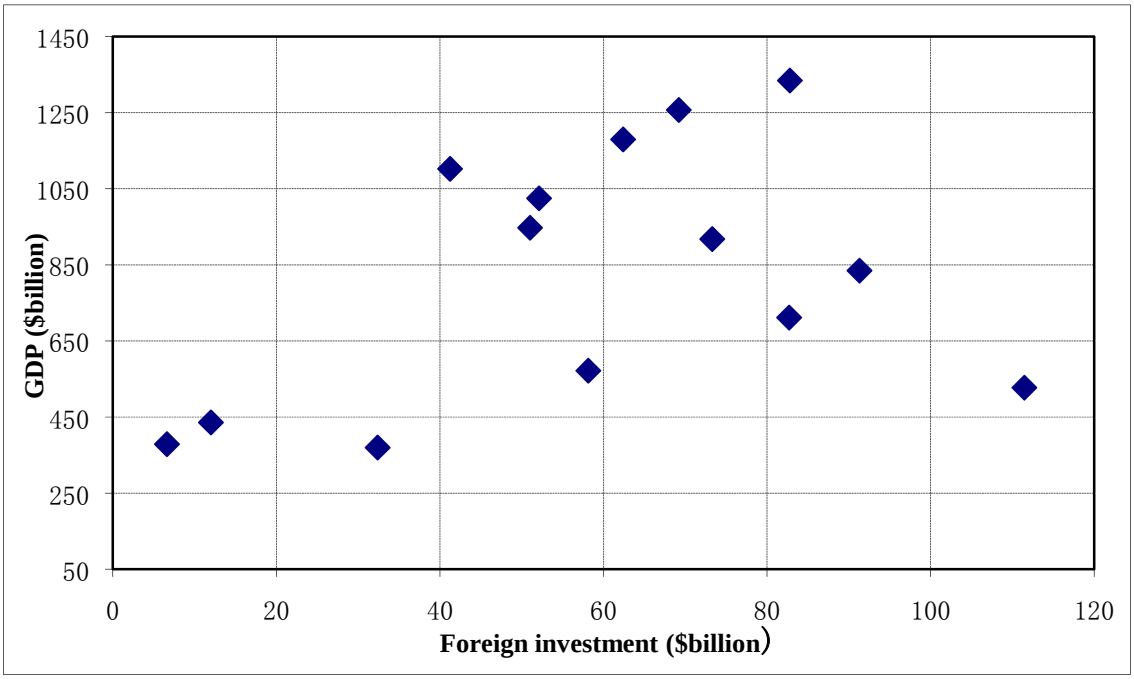

Figure 8: The dependence of GDP value on the volume of foreign direct investment in China

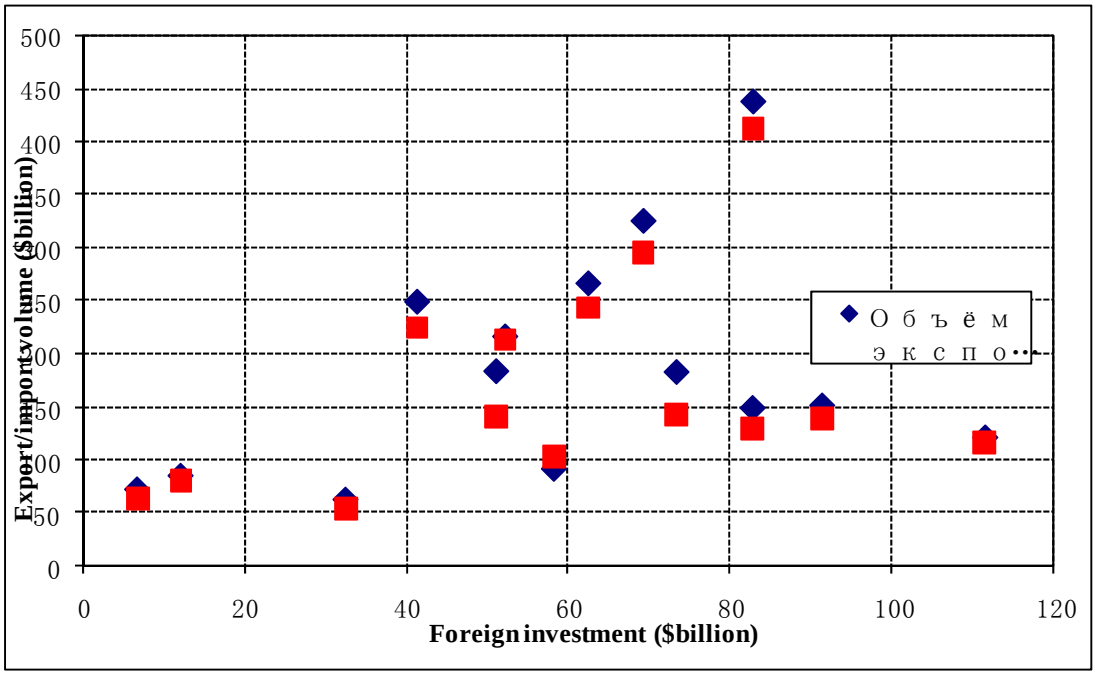

Figure 9: The dependence of export/import volume on the volume of foreign direct investment in China

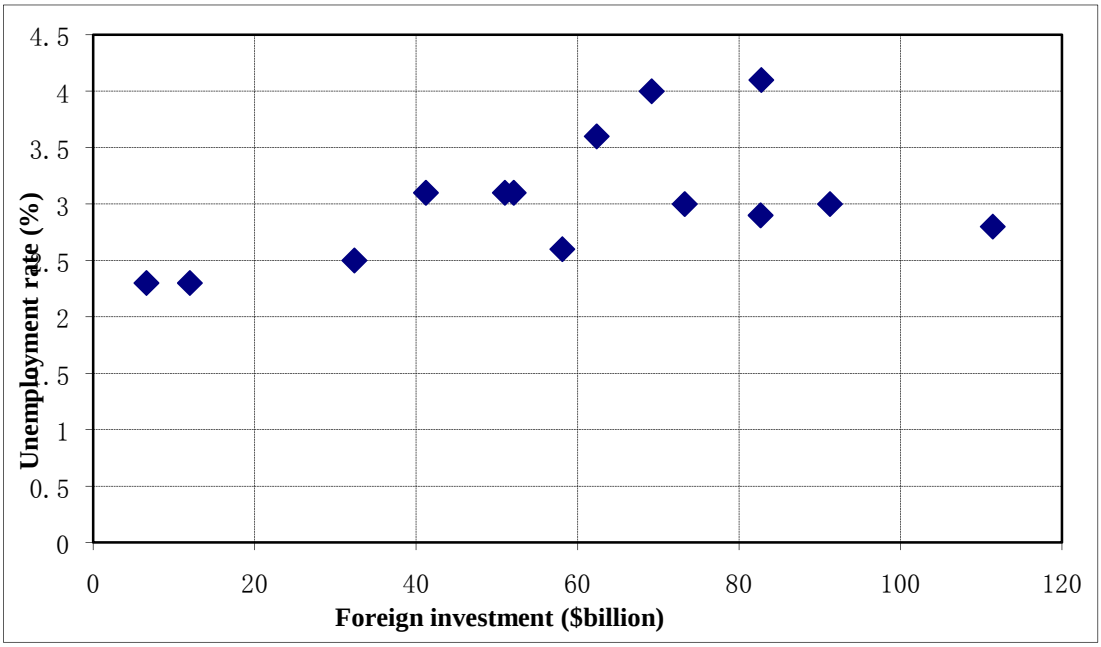

Figure 10: The dependence of unemployment rate on the volume of foreign direct investment in China

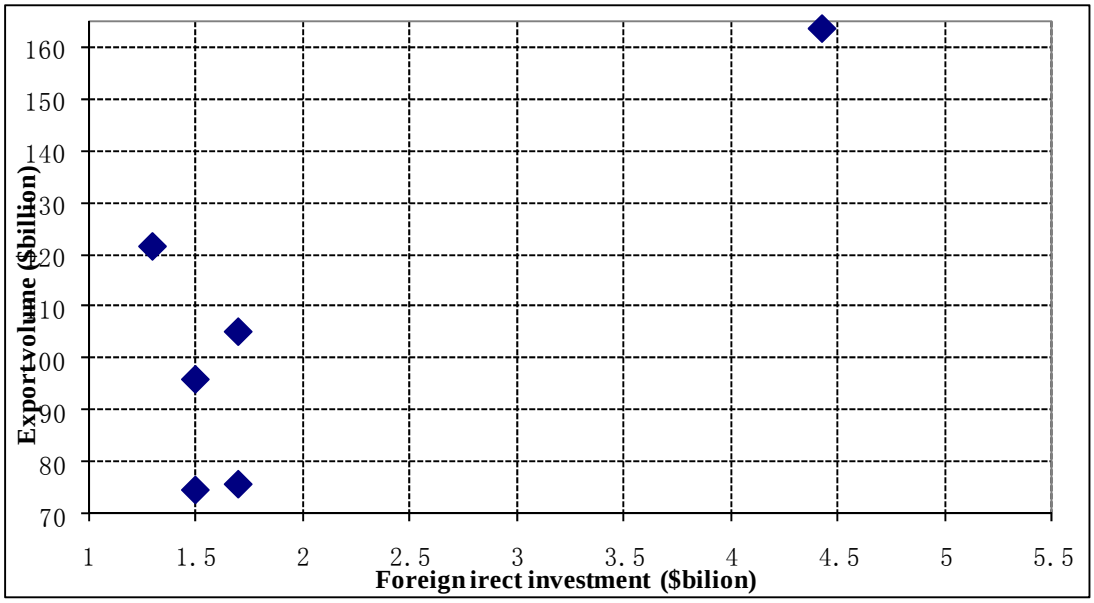

Figure 11: The correlation between the foreign direct investment and export volume in Russia

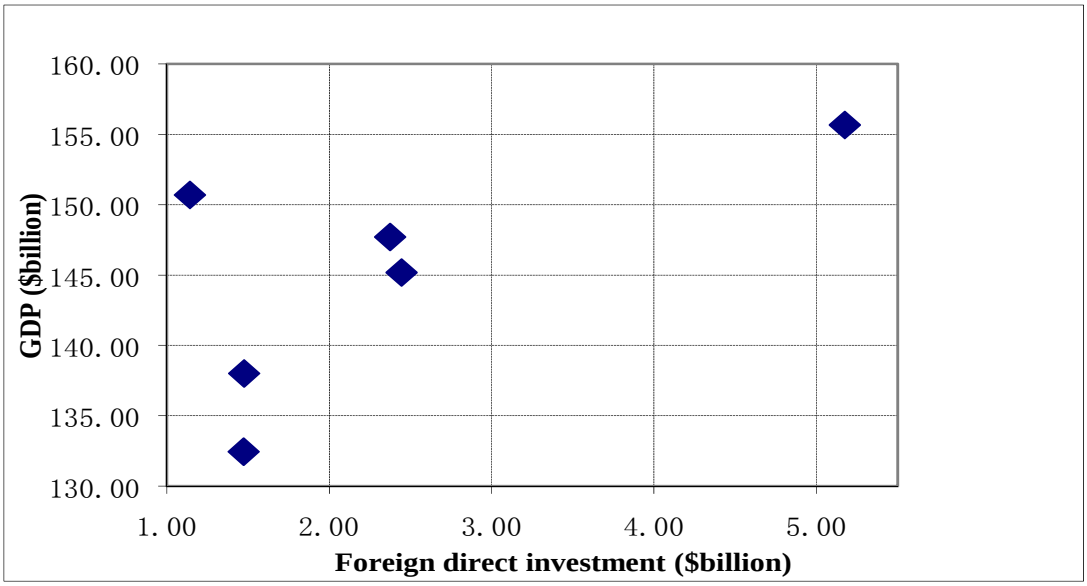

Figure 12: The correlation between the foreign direct investment and GDP value in Hungary (year 7)

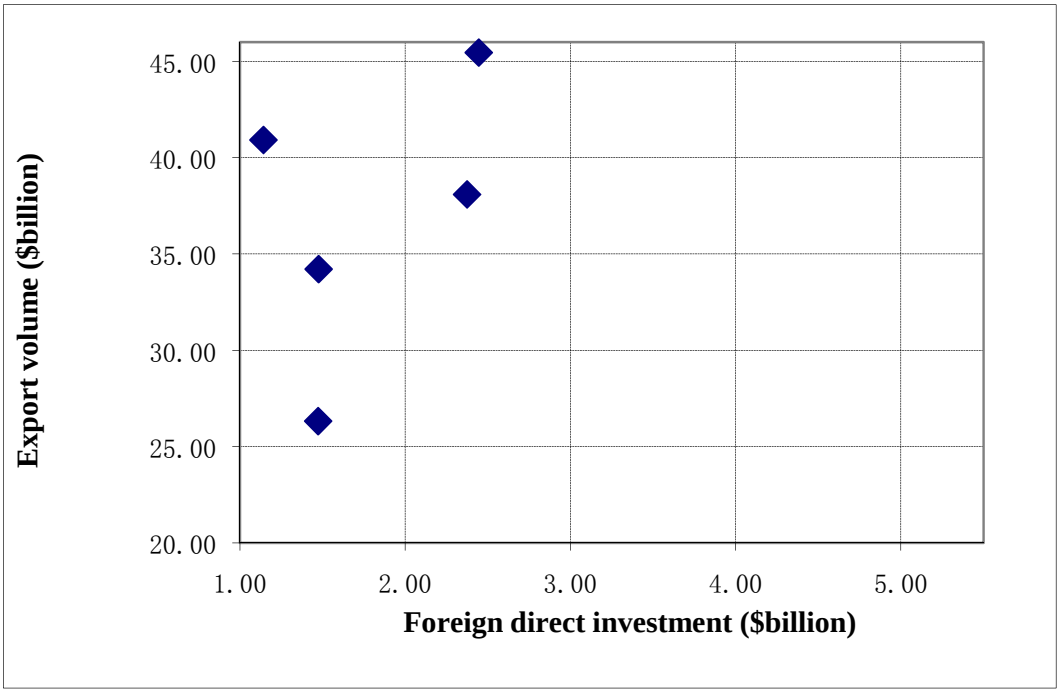

Figure 13: The correlation between the foreign direct investment and export volume in Hungary (8 year)

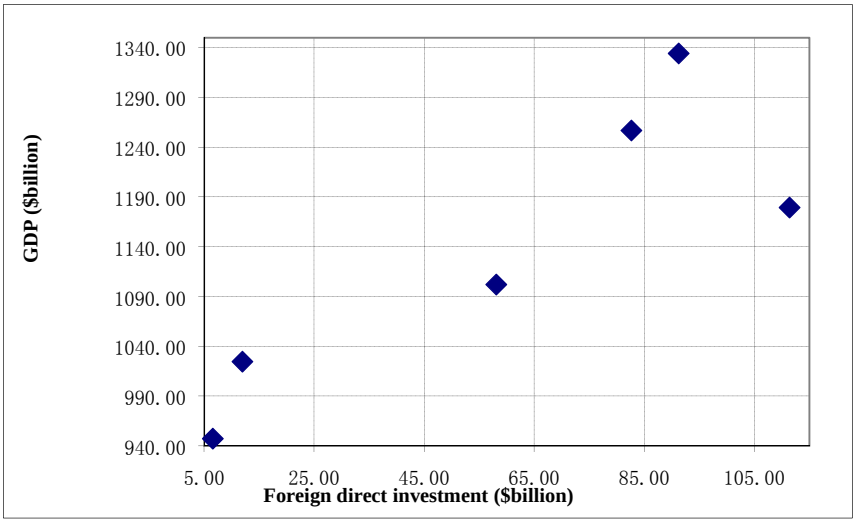

Figure 14. The correlation between the foreign direct investment and GDP value in China (years 6-8)

Appendix 1

National measures correlation (with the time gap)

Russia

Years	FDI	GDP, $billion	XP, $ billion	IM $ billion	UNP, %
1994	0,4	254,4583	67,38	50,45	7,4
1995	1,5	373,0024	82,42	62,6	8,5
1996	1,7	419,9022	89,69	68,09	9,6
1997	1,7	430,3125	86,9	71,98	10,8
1998	1,5	290,0635	74,44	58,02	11,8
1999	1,3	186,3487	75,55	39,54	12,9
2000	4,425	264,7643	105,03	44,86	10,6
2001	3,978	307,4579	95,8	54	9,1
2002	4,002	350,6585	121,5	67,1	8
2003		434,4428	163,60	84,50	8,60
Correlation coefficient		0,1593	0,6548	0,3426	-0,4676

year 1	FDI	GDP, $ billion	XP, $ billion	IM $ billion	UNP, %
1995	0,4	373,0024	82,42	62,6	8,5
1996	1,5	419,9022	89,69	68,09	9,6
1997	1,7	430,3125	86,9	71,98	10,8
1998	1,7	290,0635	74,44	58,02	11,8
1999	1,5	186,3487	75,55	39,54	12,9
2000	1,3	264,7643	105,03	44,86	10,6
2001	4,425	307,4579	95,8	54	9,1
2002	3,978	350,6585	121,5	67,1	8
2003	4.002	434,4428	163,6	84,5	8,6
Correlation coefficient		0,15931	0,654752	0,342616	-0,46759

year 2	FDI	GDP, $ billion	XP, $ billion	IM $ billion	UNP, %
1996	0,4	419,9022	89,69	68,09	9,6
1997	1,5	430,3125	86,9	71,98	10,8
1998	1,7	290,0635	74,44	58,02	11,8
1999	1,7	186,3487	75,55	39,54	12,9
2000	1,5	264,7643	105,03	44,86	10,6
2001	1,3	307,4579	95,8	54	9,1
2002	4,425	350,6585	121,5	67,1	8
2003	3,978	434,4428	163,6	84,5	8,6
Correlation coefficient		0,1876	0,754134	0,4492	-0,5292

year 3	FDI	GDP, $ billion	XP, $ billion	IM $ billion	UNP, %
1997	0,4	430,3125	86,9	71,98	10,8
1998	1,5	290,0635	74,44	58,02	11,8
1999	1,7	186,3487	75,55	39,54	12,9
2000	1,7	264,7643	105,03	44,86	10,6
2001	1,5	307,4579	95,8	54	9,1
2002	1,3	350,6585	121,5	67,1	8
2003	4,425	434,4428	163,6	84,5	8,6
Correlation coefficient		0,2430	0,7927	0,4254	-0,3311

year 4	FDI	GDP, $ billion	XP, $ billion	IM $ billion	UNP, %
1998	0,4	290,0635	74,44	58,02	11,8
1999	1,5	186,3487	75,55	39,54	12,9
2000	1,7	264,7643	105,03	44,86	10,6
2001	1,7	307,4579	95,8	54	9,1
2002	1,5	350,6585	121,5	67,1	8
2003	1,3	434,4428	163,6	84,5	8,6
Correlation coefficient		-0,0807	0,2564	-0,2207	-0,3414

Hungary

Years	FDI	GDP, $billion	XP, $ billion	IM $ billion	UNP, %
1990	312,14	58806,46	9597	8671	1,7
1991	1474,4	61100	10482,07	11732,4	8,5
1992	1477,2	61250	10676	11106	9,8
1993	2446,2	61700	8888	12521	11,9
1994	1143,5	82827,05	12435	15046	10,2
1995	5174,3	101611,6	12647	15856	9,9
1996	2375,5	126009	18613	20652	8,7
1997	2243,1	132435,4	22955	25596	7,8
1998	2084,5	137997,7	26329,25	29417,89	7
1999	2039,7	145173,6	34218,95	38983,23	6,4
2000	1691,9	150690,2	38095,41	42007,16	5,7
2001	2597,1	155663	40920,37	44684,16	5,8
2002	855,16	147700	45459	48886	5,9
2003	2500	147700	45459	48886	5,9
Correlation coefficient		0,0924	-0,0083	0,0244	0,4417

year 1	FDI	GDP, $bilion	XP, $billion	IM $billion	UNP, %
1992	312,14	61100	10482,07	11732,4	8,5
1993	1474,4	61250	10676	11106	9,8
1994	1477,2	61700	8888	12521	11,9
1995	2446,2	65000	10689	14383	10,7
1996	1143,5	101611,6	12647	15856	9,9
1997	5174,3	126009	18613	20652	8,7
1998	2375,5	132435,4	22955	25596	7,8
1999	2243,1	137997,7	26329,25	29417,89	7
2000	2084,5	145173,6	34218,95	38983,23	6,4
2001	2039,7	150690,2	38095,41	42007,16	5,7
2002	1691,9	155663	40920,37	44684,16	5,8
2003	2597,1	147700	45459	48886	5,9
Correlation coefficient		0,1789	-0,0810	-0,0534	0,1175

year2	FDI	GDP, $billion	XP, $illion	IM $bilion
1993	312,14	61250	10676	11106
1994	1474,4	61700	8888	12521
1995	1477,2	65000	10689	14383
1996	2446,2	82827,05	12435	15046
1997	1143,5	126009	18613	20652
1998	5174,3	132435,4	22955	25596
1999	2375,5	137997,7	26329,25	29417,89
2000	2243,1	145173,6	34218,95	38983,23
2001	2084,5	150690,2	38095,41	42007,16
2002	2039,7	155663	40920,37	44684,16
2003	1691,9	147700	45459	48886
Correlation coefficient		0,4202	0,2036	0,1966

year 3	FDI	GDP, $billion	XP, $billion	IM $billion
1994	312,14	61700	8888	12521
1995	1474,4	65000	10689	14383
1996	1477,2	82827,05	12435	15046
1997	2446,2	101611,6	12647	15856
1998	1143,5	132435,4	22955	25596
1999	5174,3	137997,7	26329,25	29417,89
2000	2375,5	145173,6	34218,95	38983,23
2001	2243,1	150690,2	38095,41	42007,16
2002	2084,5	155663	40920,37	44684,16
2003	2039,7	147700	45459	48886
Correlation coefficient		0,4284	0,2064	0,1945
year 4	FDI	GDP, $billion	XP, $billion	IM $billion
1995	312,14	65000	10689	14383
1996	1474,4	82827,05	12435	15046
1997	1477,2	101611,6	12647	15856
1998	2446,2	126009	18613	20652
1999	1143,5	137997,7	26329,25	29417,89
2000	5174,3	145173,6	34218,95	38983,23
2001	2375,5	150690,2	38095,41	42007,16
2002	2243,1	155663	40920,37	44684,16
2003	2084,5	147700	45459	48886
Correlation coefficient		0,5311	0,3288	0,3175

year 5	FDI	GDP, $billion	XP, $billion	IM $billion
1996	312,14	82827,05	12435	15046
1997	1474,4	101611,6	12647	15856
1998	1477,2	126009	18613	20652
1999	2446,2	132435,4	22955	25596
2000	5174,3	150690,2	38095,41	42007,16
2001	2375,5	155663	40920,37	44684,16
2002	2243,1	147700	45459	48886
2003	2084,5	147700	45459	48886
Correlation coefficient		0,5855	0,5026	0,5306

year 6	FDI	GDP, $billion	XP, $billion	IM $billion
1997	312,14	101611,6	12647	15856
1998	1474,4	126009	18613	20652
1999	1477,2	132435,4	22955	25596
2000	2446,2	137997,7	26329,25	29417,89
2001	1143,5	150690,2	38095,41	42007,16
2002	5174,3	155663	40920,37	44684,16
2003	2375,5	147700	45459	48886
Correlation coefficient		0,6520	0,5770	0,5685

year 7	FDI	GDP, $billion	XP, $billion	IM $bilion
1998	312,14	126009	18613	20652
1999	1474,4	132435,4	22955	25596
2000	1477,2	137997,7	26329,25	29417,89
2001	2446,2	145173,6	34218,95	38983,23
2002	1143,5	155663	40920,37	44684,16
2003	5174,3	147700	45459	48886
Correlation coefficient		0,7464	0,6379	0,6423

year 8	FDI	GDP, $billion	XP, $billion	IM $billion
1999	312,14	132435,4	22955	25596
2000	1474,4	137997,7	26329,25	29417,89
2001	1477,2	145173,6	34218,95	38983,23
2002	2446,2	150690,2	38095,41	42007,16
2003	1143,5	155663	40920,37	44684,16
Correlation coefficient		0,3716	0,7465	0,7251

China

Years	FDI	GDP, $billion	XP, $billion	IM $billion	UNP, %
1990	32,36	370	62,2455	53,5725	2,5
1991	6,6	379	71,9	63,8	2,3
1992	11,98	436	84,77	80,3925	2,3
1993	58,12	571,9792	91,335	103,444	2,6
1994	111,44	527,2657	121,0235	115,6905	2,8
1995	82,68	711,4371	148,797	129,113	2,9
1996	91,28	834,7292	151,187	138,944	3
1997	73,28	917,684	182,877	142,189	3
1998	51	947,2892	183,589	140,305	3,1
1999	52,1	1024,642	216,4145	213,1563	3,1
2000	41,22	1101,995	249,24	225,12	3,1
2001	62,38	1179,348	266,64	243,6	3,6
2002	69,19	1256,7	325,68	295,32	4,0
2003	82,77	1334,053	438,48	413,04	4,3
Correlation coefficient		0,3746	0,3661	0,3650	0,4885

year 1	FDI	GDP, $billion	XP, $billion	IM $billion	UNP, %
1990	32,36	370	62,2455	53,5725	2,5
1991	6,6	379	71,9	63,8	2,3
1992	11,9800	436	84,77	80,3925	2,3
1993	58,12	571,9792	91,335	103,444	2,6
1994	111,44	527,2657	121,0235	115,6905	2,8
1995	111,44	711,4371	148,797	129,113	2,9
1996	82,68	834,7292	151,187	138,944	3
1997	91,28	917,684	182,877	142,189	3
1998	73,28	947,2892	183,589	140,305	3,1
1999	51	1024,642	216,4145	213,1563	3,1
2000	52,1	1101,995	249,24	225,12	3,1
2001	41,22	1179,348	266,64	243,6	3,6
2002	62,38	1256,7	325,68	295,32	4,0
2003	69,19	1334,053	438,48	413,04	4,3
Correlation coefficient		0,3617	0,2936	0,2142	0,3635

year 2	FDI	GDP, $billion	XP, $billion	IM $bilion	UNP, %
1992	32,36	436	84,77	80,3925	2,3
1993	6,6	571,9792	91,335	103,444	2,6
1994	11,98	527,2657	121,0235	115,6905	2,8
1995	58,12	711,4371	148,797	129,113	2,9
1996	111,44	834,7292	151,187	138,944	3
1997	82,68	917,684	182,877	142,189	3
1998	91,28	947,2892	183,589	140,305	3,1
1999	73,28	1024,642	216,4145	213,1563	3,1
2000	51	1101,995	249,24	225,12	3,1
2001	52,1	1179,348	266,64	243,6	3,6
2002	41,22	1256,7	325,68	295,32	4,0
2003	62,38	1334,053	438,48	413,04	4,3
Correlation coefficient		0,3908	0,2038	0,1234	0,2101

year 3	FDI	GDP, $billion	XP, $billion	IM $billion	UNP, %
1993	32,36	571,9792	91,335	103,444	2,6
1994	6,6	527,2657	121,0235	115,6905	2,8
1995	11,98	711,4371	148,797	129,113	2,9
1996	58,12	834,7292	151,187	138,944	3
1997	111,44	917,684	182,877	142,189	3
1998	82,68	947,2892	183,589	140,305	3,1
1999	91,28	1024,642	216,4145	213,1563	3,1
2000	73,28	1101,995	249,24	225,12	3,1
2001	51	1179,348	266,64	243,6	3,6
2002	52,1	1256,7	325,68	295,32	4,0
2003	41,22	1334,053	438,48	413,04	4,3
Correlation coefficient		0,4083	0,1345	0,0583	0,0381

year 4	FDI	GDP, $billion
1994	32,36	527,2657
1995	6,6	711,4371
1996	11,98	834,7292
1997	58,12	917,684
1998	111,44	947,2892
1999	82,68	1024,642
2000	91,28	1101,995
2001	73,28	1179,348
2002	51	1256,7
2003	52,1	1334,053
Correlation coefficient		0,4544

year 5	FDI	GDP, $billion
1995	32,36	711,4371
1996	6,6	834,7292
1997	11,98	917,684
1998	58,12	947,2892
1999	111,44	1024,642
2000	82,68	1101,995
2001	91,28	1179,348
2002	73,28	1256,7
2003	51	1334,053
Correlation coefficient		0,5352

year 6	FDI	GDP, $billion
1996	32,36	834,7292
1997	6,6	917,684
1998	11,98	947,2892
1999	58,12	1024,642
2000	111,44	1101,995
2001	82,68	1179,348
2002	91,28	1256,7
2003	73,28	1334,053
Correlation coefficient		0,7316

year 7	FDI	GDP, $billion
1997	32,36	917,684
1998	6,6	947,2892
1999	11,98	1024,642
2000	58,12	1101,995
2001	111,44	1179,348
2002	82,68	1256,7
2003	91,28	1334,053
Correlation coefficient		0,8347

year 8	FDI	GDP, $billion
1998	32,36	947,2892
1999	6,6	1024,642
2000	11,98	1101,995
2001	58,12	1179,348
2002	111,44	1256,7
2003	82,68	1334,053
Correlation coefficient		0,7915