

INTERNATIONAL COMPARATIVE ANALYSIS ON GREENFIELD INVESTMENTS

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Abstract: The paper aims to analyze the greenfield investments, but also the share of greenfield investment projects by sector and branches in total greenfield foreign direct investment, in the period 2003-2011. In our research, centred on international comparisons, we will highlight the trends in the evolution of greenfield investments as well as the share of greenfield investment within FDI inflows.

Key words: foreign direct investment, greenfield investment, flow of foreign direct investment.

JED Classification: F13, F21, F23, F36

INTRODUCTION

The economic and social importance of FDI in the form of greenfield investments or "grassroots" investments is, in principle, recognised by all the experts, with the difference that their sectorial structure and branches can highlight the transfer of technologies with varying levels of economic efficiency, but also with different impact on savings, investment, and exports of a country. Specialists consider that greenfield investments, unlike other types of investment (mergers acquisitions and developments), contribute to the quantitative and qualitative growth of the fixed capital, boost employment, raise the level of competitiveness of an economy.

Table no. 1 – The value of greenfield investment projects, in the period 2003-2011

-mil. dollars-

Destination region/economy	2003	2004	2005	2006	2007	2008	2009	2010	2011
World	801 828	751 646	754 910	989 581	1 015 738	1 634 445	1 051 581	904 572	904 267
Developed countries	229 821	243 709	227 335	341 045	326 894	500 831	322 951	300 648	276 430
Europe	143 379	157 932	152 523	231 878	234 898	342 018	203 207	169 146	171 000
European Union	136 055	155 167	148 967	228 029	229 275	332 341	197 220	162 541	167 295
Austria	4 551	3 104	3 616	2 096	3 166	3 028	1 717	2 289	4 123
Belgium	2 130	4 771	4 690	4 936	10 519	10 797	3 796	6 060	3 121
Bulgaria	3 541	3 200	4 387	19 330	7 695	11 422	4 780	4 780	5 300
Cyprus	149	221	126	390	465	629	249	720	385
Czech Republic	3 892	6 520	5 098	7 677	7 491	5 684	4 575	7 733	4 910
Denmark	1 377	2 077	1 663	1 697	2 047	1 968	2 195	457	780
Estonia	855	1 435	2 032	954	840	1 481	1 208	947	883
Finland	1 228	1 221	1 485	1 797	1 269	2 415	1 208	1 661	2 180
France	5 027	7 020	11 486	18 554	19 435	24 349	11 410	9 140	10 569
Germany	20 648	12 630	13 464	18 028	18 562	36 871	20 039	17 108	15 325
Greece	2 132	2 702	915	1 706	5 096	5 278	2 090	1 123	2 372
Hungary	5 670	6 483	7 850	8 784	9 550	9 003	4 665	7 666	3 212
Ireland	6 402	8 511	9 224	6 575	4 680	8 265	4 948	4 487	7 020
Italy	5 780	9 744	8 054	11 710	11 915	14 513	10 501	11 366	5 623
Latvia	3 332	787	1 623	3 248	717	2 550	828	965	717
Lithuania	1 624	654	1 448	1 306	1 485	1 518	1 232	1 558	7 285
Luxembourg	412	574	89	228	685	431	759	731	290
Malta	70	96	154	880	299	395	467	300	174
Netherlands	3 737	4 110	4 176	4 942	5 828	9 438	9 459	10 959	5 620
Poland	11 180	15 847	14 243	15 651	22 803	35 208	14 548	11 446	12 620
Portugal	5 721	12 388	1 005	4 381	10 945	7 763	4 932	2 665	1 701
Romania	3 647	4 700	11 469	19 251	21 959	32 596	15 019	7 774	16 188
Slovakia	2 969	4 720	9 108	11 557	5 485	3 350	5 382	4 242	5 676
Slovenia	561	1 966	476	657	1 037	612	282	748	658
Spain	17 520	14 405	10 382	21 157	23 589	31 572	15 993	16 372	11 343
Sweden	3 248	3 449	3 059	7 037	4 391	2 982	2 879	2 364	3 081
United Kingdom	18 653	21 830	17 641	33 500	27 321	68 224	52 008	26 983	36 140
Other developed Europe	7 324	2 765	3 556	3 848	5 623	9 676	5 988	6 605	3 704
Iceland	2 746	106	2	186	53	1 077	-	705	203
Norway	2 797	863	1 853	915	795	3 200	2 334	2 236	830
Switzerland	1 781	1 797	1 671	2 747	4 644	5 391	3 654	3 655	2 672
North America	50 264	47 487	53 458	54 174	58 725	114 580	87 613	82 058	84 546
Canada	23 380	15 357	17 056	15 507	8 632	20 541	14 084	18 913	27 197
United States	26 885	32 131	36 402	38 666	50 094	94 039	73 529	63 145	57 349
Other developed countries	36 178	38 290	21 355	54 993	33 271	44 233	32 131	49 444	20 884
Australia	23 591	29 479	9 109	37 695	22 828	30 062	19 990	41 186	12 137
Israel	967	1 683	4 757	914	457	853	3 333	856	697
Japan	10 028	6 500	6 375	14 599	7 762	11 287	8 240	6 400	6 089
New Zealand	1 384	515	1 081	1 762	2 177	2 030	568	380	1 956

Source: UNCTAD, WIR 2012

The evolution of the value of the greenfield investment volume, in the period 2003-2012, was in its early years a favorable one, being characterized by an upward trend until 2008, and then by a decrease in the years 2009 and 2010, a period after which in some countries, including Romania, growth is resumed.

In Romania, greenfield investments suffered a dramatic decrease of 50% in 2009 compared with 2008, after which, in 2010 there was another decline of about 50% compared to the year 2009, while in the following year, 2011, their volume increased by more than 50% compared to the year 2010.

In comparison with countries having a transition economy, greenfield investments in developed countries were higher in the early part of the period considered, from 2003 to 2008, after which a less severe reduction occurred in the period 2009-2011. This sinuous and partially variable evolution is related to the fact that the developed countries, with the largest greenfield investment volume, record a certain saturation threshold with greenfield FDI, as, in general, it is considered that the share of FDI in national economy may increase up to a certain limit, after which it is replaced with domestic investment.

Table no. 2 – The evolution of fixed base indices for greenfield investments, in the period 2003-2011

	2003 = 100%							
Destination region/economy	2004	2005	2006	2007	2008	2009	2010	2011
World	93,74	94,15	123,42	126,68	203,84	131,15	112,81	112,78
Developed countries	106,04	98,92	148,40	142,24	217,92	140,52	130,82	120,28
Europe	110,15	106,38	161,72	163,83	238,54	141,73	117,97	119,26
European Union	114,05	109,49	167,60	168,52	244,27	144,96	119,47	122,96
Austria	68,21	79,47	46,05	69,58	66,55	37,74	50,30	90,60
Belgium	224,03	220,23	231,77	493,94	507,00	178,24	284,56	146,57
Bulgaria	90,38	123,90	545,94	217,33	322,60	135,01	135,01	149,70
Cyprus	147,96	84,53	261,51	311,72	421,10	166,44	482,12	258,07
Czech Republic	167,55	131,02	197,27	192,50	146,07	117,56	198,72	126,17
Denmark	150,78	120,75	123,21	148,64	142,86	159,39	33,15	56,62
Estonia	167,84	237,66	111,59	98,22	173,23	147,32	110,73	103,23
Finland	99,39	120,93	146,30	103,31	196,59	98,35	135,21	177,50
France	139,65	228,47	369,09	386,61	484,35	226,96	181,81	210,24
Germany	61,17	65,21	87,31	89,90	178,57	97,05	82,85	74,22
Greece	126,73	42,91	80,02	239,00	247,55	98,01	52,65	111,26
Hungary	114,34	138,44	154,93	168,44	158,79	82,28	133,44	56,65
Ireland	132,94	144,08	102,70	73,10	129,10	77,28	70,08	109,64
Italy	168,60	139,35	202,60	206,15	251,11	181,69	196,65	97,30
Latvia	23,62	48,70	97,48	21,51	76,52	24,84	28,96	21,52
Lithuania	40,28	89,21	80,43	91,46	93,48	75,92	95,97	448,73
Luxembourg	139,34	21,70	55,41	166,20	104,56	184,24	177,38	70,27
Malta	138,16	221,52	1.262,61	428,97	566,51	670,59	430,85	250,11
Netherlands	109,99	111,77	132,25	155,97	252,57	253,14	293,30	150,40
Poland	141,75	127,40	139,99	203,97	314,93	130,13	102,38	112,88
Portugal	216,53	17,57	76,57	191,30	135,68	86,20	46,58	29,74
Romania	128,87	314,47	527,84	602,09	893,74	411,80	213,15	443,86
Slovakia	158,98	306,77	389,25	184,75	112,84	181,26	142,87	191,18
Slovenia	350,58	84,88	117,10	184,99	109,09	50,26	133,45	117,34
Spain	82,22	59,26	120,76	134,64	180,21	91,29	93,45	64,74
Sweden	106,19	94,18	216,65	135,17	91,80	88,63	72,77	94,84
United Kingdom	117,03	94,58	179,60	146,47	365,75	278,82	144,66	193,75
Other developed Europe	37,76	48,56	52,55	76,78	132,12	81,75	90,18	50,58
Iceland	3,86	0,07	6,77	1,93	39,23	0,00	25,67	7,37
Norway	30,84	66,26	32,73	28,44	114,41	83,44	79,95	29,66
Switzerland	100,88	93,83	154,27	260,76	302,72	205,16	205,23	150,04
North America	94,48	106,35	107,78	116,83	227,96	174,30	163,25	168,20
Canada	65,68	72,95	66,33	36,92	87,86	60,24	80,90	116,33
United States	119,51	135,40	143,82	186,33	349,79	273,50	234,87	213,32
Other developed countries	105,84	59,03	152,01	91,96	122,26	88,81	136,67	57,73
Australia	124,96	38,61	159,78	96,76	127,43	84,73	174,58	51,45
Israel	174,09	491,93	94,48	47,30	88,26	344,67	88,49	72,04
Japan	64,82	63,58	145,59	77,40	112,56	82,17	63,82	60,72
New Zealand	37,23	78,10	127,36	157,31	146,73	41,08	27,45	141,37

Source: Our own calculations, based on primary data (web) of UNCTAD, WIR 2012.

Given the importance of greenfield investments, both for the economies of developed countries and developing ones, we have carried out an analysis of their evolution based on fixed-base indices during the period 2003-2011, paying particular attention to the sub-periods 2003-2006 and 2007-2011, which mark the pre-accession and respectively post-accession phases of Romania, but also in the latter sub-period, the impact of international economic and financial crisis that had the effect of reducing the volume of total investments and of greenfield investments, in both types of countries (developed and developing ones).

The worldwide economic situation is characterized by a relatively modest increase in the period 2003-2007, after which there is a relatively large increase in 2008, followed by a significant decline in 2009 and 2010. We note that, both at a global level and at the level of the developed countries, investment in greenfield met the highest level of their volume in 2008, which is the trigger of the crisis year, characterized by modest dynamics of other investment categories, but by high dynamics of greenfield investments.

In other words, it was confirmed that investment in research and development and in the branches of leading technological progress was regarded as a factor that might counter the economic crisis and that might trigger the exit from the crisis, compared to other types of investments. In terms of greenfield investment evolution in Romania, figures show that in 2008 they were 8.9 times higher than in 2003, while their original level was very modest, so that not even this very high dynamics managed to contribute to a high proportion of annual investments of greenfield in the total volume of FDI.

As a rule, the 2009 and 2010 have meant a drastic recoil in greenfield investment volume for all countries, both developed and less developed, so that we have all the evidence of the negative impact that had the economic crisis in the period 2009-2011 had on greenfield investments.

However, there are a number of countries that make an exception in the sense that 2011 is characterized by an increase in greenfield investments. The European Union as a whole, Austria, Bulgaria, Denmark, Finland, France, Greece, Ireland, Lithuania, Poland, Romania, Slovakia, the United Kingdom, Sweden and New Zealand are in this situation. We believe that these countries have succeeded to an extent greater than fend off the effects of the crisis on greenfield investment and to resume their growth.

In the rest of the countries analyzed the effects of the crisis were felt in the years 2010 and 2011 being translated into a further reduction of greenfield FDI.

Greenfield FDI stock level was much lower in Romania compared to other countries, although the share in total FDI stock shows a percentage value greater than the world average in Romania and EU countries.

An interesting issue related to greenfield investments is represented by the structures grouped by economic activities that provide us with comparative benchmarks in relation to various categories of specific technological activities in question.

Referred to as investments *novo* greenfield investments were a factor *sui generis* of the transition, with features distinct from the mergers and acquisitions, in the sense that the foreign investor to start a business from the beginning.

Table no. 3 – The share of greenfield investment projects by sector and branches in total greenfield FDI, in the period 2003-2011

-%-

Sectors and branches	2003	2004	2005	2006	2007	2008	2009	2010	2011
Worldwide total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
- Primary sector	16.49	12.07	15.41	7.84	7.20	8.73	11.16	6.72	8.41
• Agriculture, forestry and fishery	0.17	0.17	0.08	0.11	0.01	0.00	0.02	0.00	0.01
• Extraction industry	16.32	11.91	15.32	7.72	7.19	8.73	11.14	6.72	8.39
Manufacturing industry	53.36	51.76	49.79	47.29	46.19	40.20	40.80	53.89	51.00
• Food, beverages, Tobacco	4.00	3.83	3.50	3.02	2.71	2.93	5.02	3.58	4.34
• Textile, garment industry, Leatherware	1.29	1.56	1.49	1.23	1.27	0.94	1.87	2.05	1.90
• Wood and wood products	2.52	1.92	2.07	1.02	1.60	1.39	0.48	1.00	1.43
• Publication and printing	0.06	0.18	0.08	0.02	0.02	0.04	0.01	0.01	0.02
• Coke, oil and nuclear fuel	10.93	8.29	7.99	9.91	5.98	8.97	7.24	8.90	5.85
• Chemicals and chemical products	8.40	7.42	4.74	5.52	4.79	4.58	5.26	5.85	7.02
• Rubber and plastics	1.68	1.89	1.64	1.35	1.30	1.11	1.67	2.38	2.71
• Non-metallic mineral products	1.01	1.40	1.62	1.90	1.90	2.09	1.04	1.19	1.86
• Metal and metal products	4.56	5.37	7.72	5.54	6.96	6.27	3.57	7.33	7.95
• Machinery and equipment	0.89	0.82	1.30	0.85	0.95	1.15	1.35	1.53	2.00
• Electric and electronic equipment	7.98	9.14	8.08	8.67	8.78	3.62	5.01	7.62	5.37
• Accuracy instruments	0.23	0.27	0.30	0.34	0.19	0.27	0.43	0.36	0.29
• Motorized vehicles and other means of transport	9.22	8.99	8.62	7.25	8.77	6.03	6.76	10.77	9.32
• Other branches of the manufacturing industry	0.58	0.68	0.64	0.64	0.97	0.80	1.11	1.32	0.96
- Services	30.15	36.17	34.80	44.88	46.61	51.07	48.04	39.39	40.59
• Power, gas and water	3.18	5.12	4.02	6.78	8.85	11.77	14.48	9.20	10.17
• Building	3.42	6.21	4.49	10.40	8.93	9.38	9.08	4.87	4.50
• Commerce	1.85	2.13	1.75	1.85	1.39	1.17	1.70	2.07	1.71
• Hotels and restaurants	4.28	3.23	3.37	3.22	4.06	3.71	3.49	2.95	2.16
• Transport warehousing and communication services	9.01	10.84	9.37	8.02	6.05	7.02	6.96	6.92	7.94
• Finance	2.67	2.99	3.62	3.92	4.83	3.69	4.22	4.73	5.12
• Business services	4.24	4.41	6.52	9.90	11.12	12.09	7.07	7.03	7.99
• Education	0.04	0.09	0.13	0.13	0.08	0.11	0.18	0.20	0.18
• Health and social services	0.07	0.08	0.11	0.08	0.14	0.18	0.20	0.26	0.17
• Community, social and personal services	1.37	0.95	1.40	0.54	1.07	1.70	0.56	0.88	0.47
• Other activities	0.02	0.11	0.03	0.03	0.10	0.26	0.11	0.28	0.18

Source: Our own calculations based on primary data (web) of UNCTAD, WIR 2012.

Table no. 3 shows at a worldwide level the following conclusions concerning the allocation of foreign direct investments of greenfield type, by sectors and branches of activity:

- in the primary sector, there was a reduction of about half of the share of investments from 16.49% to 8.41%, during the period considered, which shows that this sector, particularly agriculture, did not benefit from growing greenfield investment;
- in the processing industry, there was a decrease in the share of FDI greenfield, sharper during the 2008-2009 crisis, followed by a significant increase in the years 2010-2011, to 51.00%, however, without reaching the 53.36% share obtained in 2003;
- increases of greenfield FDI weights within the manufacturing industries were registered in the branches of rubber and plastic products (2.71%

compared to 1.68%), non-metal mineral products (1.86% compared to 1.01%), metal and metal products (7.95%, compared to 4.56%), machinery and equipment (2.00%, compared to 0.89%);

- for the domains of precision tools and motor vehicles and other means of transport greenfield FDI share remains constant ;
- there is an outstanding increase of the share of greenfield FDI in Services, from 30.15% in 2003 to 40.59% at the end of the period considered, i.e. 2011, based on the growth of share in the Energy, gas and water (10.17% compared to 3.18%), Finance (5.12% compared to 2.67%), Business services (7.99% comparing to 4.24%), which is explained by the fact that the services still represent a domain preferred by greenfield FDI, particularly in the financial and energy sectors, although the crisis has shown that financial services commercial ones are the least resistant to crisis shocks.

CONCLUSIONS

As a general conclusion, we note that greenfield FDI in the manufacturing industry, as share in the total volume of greenfield FDI in the economy, hold the largest share, that is 51.00% comparing to 40.59% percent, as it is for the tertiary sector.

FDI represents a complementary source of domestic investments which, as a rule, facilitates the transfer of technology, innovative activities, leading to increased employment, in particular by means of greenfield investment and relaunching growth in the host country.

In conclusion, we believe that the specialized literature remarks that on the background of the favourable impact of foreign direct investment, a less favourable dimension is taking shape when it comes to the ratio between their effects in the host country and respectively the country of origin, if to the above mentioned aspects are added a series of other issues relating to the transfer of value between the subsidiary and the parent company through so-called price transfers detrimental to the host country, unequal barter relationship between the two countries, a relationship of lending and repayment, based mainly on the financial and currency speculation on the stock market.

In our opinion, both the macroeconomic approach, and the punctual one of foreign direct investments on national economies should be based on the application of the principle of economic efficiency in the broadest sense, which implies the inclusion, in addition to the effects of the financial costs of the parties involved (stakeholders), of the externalities, both positive and negative, that foreign direct investment generate on the short, medium and long term¹.

The flow of foreign direct investment worldwide is steadily increasing.

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¹ In this regard, see „Cost benefit analysis of investment projects funded by EU Structural and Cohesion Funds”

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