THE RELATIONSHIP BETWEEN GDP/CAPITA DYNAMICS AND THE LEVEL OF MIGRATION INSIDE ROMANIAN S MACROREGIONS

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Abstract: *Emigration continues to be one of the very sensitive topics. Even if the most frequently mentioned causes of emigration are wars, natural disasters, politics, different types of discrimination, human rights abuses etc..; economic causes still remains the most important. In this paper we analyzed the causal relationships between how the two categories of Romanian s Macroregions indicators have evolved: GDP / capita and the level of emigration. Analyzing the the GDP / capita we find out information not only about the particularities of the standard of living in different regions of Romania, but especially on citizens' intentions to migrate. This was the main reason why we deepened analysis by age, knowing that young people s desire to migrate is higher, not just because of the spirit of adventure specific for age, but especially economic reasons: the impossibility of employment according to education background, lack experience required by employers etc. Our analysis identified an inverse relationship between increasing levels of GDP / capita and the number migrants. So how if the revenue in their region increase, the desire of young people to migrate decreases. Interesting it is also how potential migrants reacts to evolution of the GDP / capita. This behavior is registering a slight increase in the last 10 years of the 24 analyzed. Data from the period 1990 - 1992 are likely to be not relevant for our study, mainly because in the early years after the Romanian Revolution we have identified a massive movement from the regions where ethnic Germans lived, to Germany Republic; the economic criteria may be not the main reason for migrate, but reunification families. Also, the number of those leaving the regions is nearly identical to who are established in Germany in same period of time. This was the reason why our data focuses only on the interval 1992-2016, analyzing migrants by age groups and countries of destination*

Keywords: GDP/capita evolution, macroregions of Romania, migration, standard of living

JEL classification: E01, E03, E24, O11, O15

Talking nowadays about emigration through an economic key is not an act of courage but rather a duty. Especially with growth pressure of this phenomenon on the economy of Romania, we consider it appropriate to identify correct and complete the main link between the evolution of GDP / capita and intention of Romanian citizen to migrate, on different age groups, backgrounds, especially

geographic location.

First of all, we want to start to make some methodological notes. Our analysis will be performed on the four macro corresponding NUTS I, according with the divisions agreed by member states of the European Union. We mention also that these four macro-regions have no administrative status itself, or its own form of government, there are only for collecting statistics at regional level. Macro regions that are used in our study have the following components and are graphic presented according to the image below: First macro region includes the counties: Bihor, Bistriţa-Năsăud, Cluj, Maramureş, Satu Mare, Sălaj, Alba, Braşov, Covasna, Harghita, Mureş, Sibiu; second macro-region is composed of Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui, Brăila, Buzău, Constanţa, Galaţi, Tulcea, Vrancea; the third one is formed by: Argeş, Călăraşi, Dâmboviţa, Giurgiu, Ialomiţa, Prahova, Teleorman, Ilfov, Municipiul Bucureşti. And the forth one includes the counties: Dolj, Gorj, Mehedinţi, Olt, Vâlcea, Arad, Caraş-Severin, Hunedoara, Timiş.
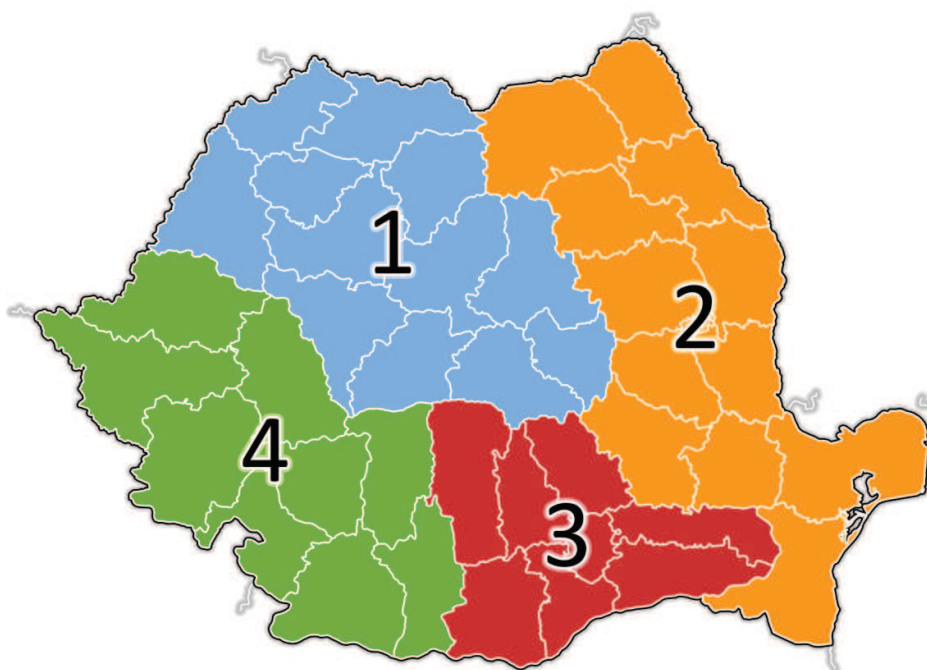

Figure 1: Romanian Macroregions NUTS 1
Source:http://ec.europa.eu/eurostat/documents/3859598/5916917/KS-RA-11-011-EN.PDF, p.112-113

The data we analyze are targeting Romanian migrants: by sex, age groups and

destinations. Source is the National Institute of Statistics of Romania and according to which the immigrants with flit are people (Romanian citizenship) who emigrated abroad. Emigration is the act by which a person gives up residence in Romania and established their residence in another State. Residence in Romania is the address of one declaring to have the main house, noted in the identity card (CI / CI provisional BI), as it is taken out of state administrative office. Their age is expressed in years old (for example, a person having aged 24 years and 11 months is considered as having age of 24 years). For the period 1990-1993 information is not available because the data provided by the Ministry of Interior on external migration cannot be reconstructed individually. By 1994 these data were mixed together with departures residing both in population and by locally.

Due to the large volume of data, the analysis was done by dividing the period under review in two parts: 1990-2002 and 2003-2016.

Table 1: Immigrants of macro-region 1 by age

years	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0-9	1512	1013	752	935	797	762	629	522	1039	645	227
10-19	2047	1164	803	974	747	672	472	359	426	296	263
20-29	4938	2162	2072	3435	2441	2181	1279	919	1164	701	967
30-39	3304	1481	1297	2079	1414	1563	1016	863	1085	784	844
40-49	1664	780	619	1088	834	909	560	395	502	314	319
50-59	1403	694	408	568	452	439	320	216	345	160	189
60-69	1221	520	272	471	391	346	352	228	281	269	255
70-79	369	188	94	182	146	158	159	102	145	87	86
80 +	199	88	34	47	60	44	38	17	24	16	14

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP309E

Analyzing the situation presented on table 1, we notice the fact that most children under the age of nine left the country in 1992 (1512 people), their number had been decreasing until 2000 when we can see, again, an important growth compering to previous year (1039 in 2000 compared to 522 people in 1999). This category must be related also to age range 20-29 and 30-39, most of them being members of the same family and emigrated together. Persons of age between 10 and 19 left the county in 1992 in a number of 2047. This number decrease significantly in the next years, in 2011 reaching 296 persons. People of age between 20 and 29 years old records the highest movements in 1992, almost 5000 persons leaving the country. Once getting older and years passing by, number of persons over 50 years old living the country rarely exceed 1000.

Table 2: Immigrants of macro-region 2 by age

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0-9	148	230	249	345	417	666	657	568	944	678	185
10-19	170	139	165	187	192	209	156	153	223	188	147
20-29	750	427	560	949	910	881	715	455	710	589	509
30-39	393	231	301	548	502	500	502	457	740	680	641
40-49	229	84	124	239	220	254	196	186	252	223	191
50-59	76	4	31	87	107	117	80	65	93	67	45
60-69	80	35	35	49	58	107	81	56	58	28	23
70-79	25	18	18	21	30	56	55	25	20	19	13
80 +	17	6	6	2	2	8	13	8	4	8	8

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP302E

Table 3: Immigrants of macro-region 3 by age

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0-9	359	543	1581	1342	822	704	3183	1838	875	562	170
10-19	457	319	367	599	631	439	643	407	283	213	153
20-29	1231	708	807	1679	1504	1246	953	708	777	412	376
30-39	1279	733	806	1806	1498	1060	877	759	1033	715	581
40-49	786	335	405	995	1058	718	611	448	508	320	265
50-59	391	116	106	264	375	326	285	222	190	211	103
60-69	298	121	89	163	252	275	251	156	149	82	78
70-79	137	54	40	90	171	192	201	120	94	67	49
80 +	57	14	13	30	42	56	72	46	43	17	16

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP303E

Table 4: Immigrants of macro-region 4 by age

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0-9	535	680	570	673	659	659	461	383	542	272	96
10-19	913	849	651	676	564	531	359	235	263	176	158
20-29	2202	1484	1357	2103	1653	1520	796	581	668	398	428
30-39	1716	1180	1003	1418	1009	1034	680	491	738	431	417
40-49	932	661	562	821	752	702	387	254	336	207	167
50-59	607	561	412	351	404	280	187	123	130	82	81
60-69	525	474	336	317	275	217	163	75	106	59	46

70-79	189	213	141	105	127	92	92	48	52	27	24
80 +	66	101	56	37	30	22	15	6	5	8	10

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP304E

By looking at data presented on tables 2, 3 and 4 we can notice the same pattern towards migrants on age, differences consisting of volume as we can see on tables 5 and 6

Table 5: permanent Immigrants by sex 1991-2000

M	NUTS1	Ani									
		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	unu	11189	8484	3927	2994	4506	3438	3379	2256	1643	2298
	doi	1750	1057	606	729	1052	1164	1342	1181	997	1433
	trei	2934	2563	1348	1807	2994	2858	2306	3513	2233	1787
	patru	5338	3981	2870	2356	2926	2619	2396	1510	985	1280
F	unu	11472	8100	4163	3357	5273	3844	3695	2569	1978	2613
	doi	1975	831	604	760	1315	1264	1456	1274	1076	1617
	trei	3286	2432	1595	2411	3974	3495	2710	3613	2471	2165
	patru	6216	3704	3333	2732	3575	2844	2661	1620	1211	1560

Source: http://statistici.insse.ro/shop/?page=tempo3&lang=ro&ind=POP309B

Table 6: permanent Immigrants by sex 2001-2014

M	NUTS1	Ani													
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	unu	1652	1398	1708	1960	1360	1680	860	956	1110	772	1599	1570	1560	1170
	doi	1330	893	958	1168	1211	1511	822	787	965	807	2116	2115	2014	1405
	trei	1237	785	975	959	878	1200	795	759	983	787	3571	3218	3667	1286
	patru	792	624	772	847	661	950	611	567	710	551	1241	1271	1285	915
F	unu	1620	1766	2404	3268	2399	2935	1755	1685	1863	1383	2079	1972	2158	1476
	doi	1150	879	1363	1724	1801	2405	1563	1506	1666	1325	2407	2532	2622	2040
	trei	1272	1006	1355	1676	1383	1903	1355	1357	1597	1271	3642	3675	4127	1725
	patru	868	803	1138	1480	1245	1613	1069	1122	1317	1010	1652	1648	1623	1234

Source: http://statistici.insse.ro/shop/?page=tempo3&lang=ro&ind=POP309C

Conclusions that can be drawn by analyzing these 2 tables is that, clearly the number of emigrating women is higher that the men's number; which remains mainly steady by entire analyzed period.
For a big picture, we would like to present the consolidated report of emigrants by macro-regions by 2 intervals: 1995-2002 and 2003-2014.

Table 7: immigrants on macroregions 1990-2002

ani	1995	1996	1997	1998	1999	2000	2001	2002
Macro 1	9779	7282	7074	4825	3621	5011	3272	3164

Macro 2	2427	2375	2798	2455	1973	3044	2480	1762
Macro 3	6968	6353	5016	7076	4704	3952	1884	1791
Macro 4	6501	5473	5057	3140	2195	2840	1660	1427
Total	25675	21483	19945	17495	18087	15847	9296	8144

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP309xE

Highest number of emigrants in this range of time, left from macro-region 1 in 1995, the number still remaining high until the early 2000 when we see a sharp decline, dropping that will remain also between 2003 and 2014. In the same period, we see that inside macro-regions 2 and 3, the number of people emigrating is sensitive lower than in macro-regions 1 and 4.

Table 8: Immigrants on macroeregions 2003-2014

ani	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Macro 1	4112	5228	3759	4615	2615	2641	2973	2155	3678	3542	3718	2646
Macro 2	2321	2892	3012	3916	2385	2293	2631	2132	4523	4647	4636	3445
Macro 3	2330	2635	2261	3103	2150	2116	2580	2058	7213	6893	7794	3011
Macro 4	1910	2327	1906	2563	1680	1689	2027	1561	2893	2919	2908	2149
Total	10673	13082	10938	14192	8830	8739	10211	7906	18307	18001	19056	11251

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP309zE

Situation changes essentially between 2003 and 2014, when starting with year 2000 we notice a steady growth for the persons in Macro –regions 2 and 3, given that macro-regions 1 and 4 keep the emigrant level steady. Taking into account also the destination country, as it is mention on table 9 and 10, we consider that on first range of time analyzed (1990-2002) the ones that left the country up to 1999, from macro-regions 1 and 4 were German ethnics or Hungarians, their destinations were mostly Germany, Austria and Hungary. Based on this information we believe the main reason for massive migration at the beginning of '90 had mainly causes that aimed at family reunification not only economics, specific, according to us to a period after year 2000.

Table 9: Immigrants by country of destination 1990-2002

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Australia	611	301	297	236	220	136	165	207	206	124	143	79	58
Austria	3459	4630	3282	1296	1256	2276	915	1551	941	468	270	167	293
Canada	1894	1661	1591	1926	1523	2286	2123	2331	1945	1626	2518	2483	1437

Elveţia	-	-	-	-	-	-	-	-	-	-	-	100	141
Franţa	1626	1512	1235	937	787	1438	2181	1143	846	696	809	463	233
Germania	66121	20001	13813	6874	6880	9010	6467	5807	3899	2370	2216	854	1305
Grecia	576	354	143	80	87	193	274	232	316	214	328	105	60
Israel	1227	519	463	324	417	316	418	554	563	326	433	279	106
Italia	1130	1396	528	645	1580	2195	1640	1706	1877	1415	2142	1486	1317
Slovacia	-	-	-	-	-	-	-	-	-	-	-	20	122
Spania	-	-	-	-	-	-	-	-	-	-	-	616	172
SUA	4924	5770	2100	1245	1078	2292	3181	2861	2868	2386	2723	1876	1356
Suedia	996	381	686	199	176	520	310	468	129	98	90	51	42
Ungaria	10635	4427	4726	3674	1779	2509	1485	1244	1306	774	881	680	903
Alte ţări	3730	3208	2288	1010	1363	2504	2367	1841	2640	2097	2200	662	609

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP309D

Table 10: Immigrants by country of destination 2003-2014

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	45	84	78	125	83	82	128	81	112	92	97	45
Austria	326	491	421	581	313	345	421	569	1089	1032	981	569
Canada	1444	1445	1220	1655	1787	1738	2045	858	967	846	954	688
Elveţia	200	182	151	178	115	120	99	85	93	88	130	114
Franţa	338	436	343	529	372	431	576	405	663	660	663	495
Germania	1938	2707	2196	3110	1902	1788	1938	1399	2014	1907	2283	2008
Grecia	64	97	114	134	72	85	124	133	160	162	110	60
Israel	164	85	64	128	57	50	111	62	2857	2292	2506	22
Italia	1993	2603	2731	3393	1401	1098	984	844	1906	2097	2607	1553
Slovacia	130	54	19	30	11	7	6	26	3	6	12	6
Spania	186	162	139	330	138	238	547	882	3352	4605	4968	3134
SUA	2012	2049	1679	1982	1535	1591	1793	1086	1350	1073	819	536

Suedia	50	62	29	37	2	7	15	17	20	29	44	51
Ungaria	984	1553	1013	900	266	354	331	266	514	355	346	286
Alte ţări	799	1072	741	1085	776	805	1093	1193	3207	2757	2536	1684

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=POP309D

We can notice interesting aspect concerning USA and Canada, when in the 90s we identify a significant flow of migrants. This flow gradually decreases reaching today just a few hundreds of people (536 USA and 688 Canada) while in the 90s, just in one year were 6000 Romanian immigrants in US. Also Israel has a situation at least strange given that in the 90s were hundreds of people immigrating annually, to reach over 2,000 people annually, by 2010. Therefore, we consider that not criteria of economics nature were the most important in the 90s inhabitants from macro-regions 1 to 4, and that it is not advisable to try to impose some general conclusions on these criteria, without making an analysis of destination countries.

Further we wish to analyze the dynamic of GDP/ capita on each macro-region to see if indeed the evolution of these indicator can be correlated with migrant's number; quite often it is made a number of statements in this sense especially in the media, but without bringing scientific arguments.
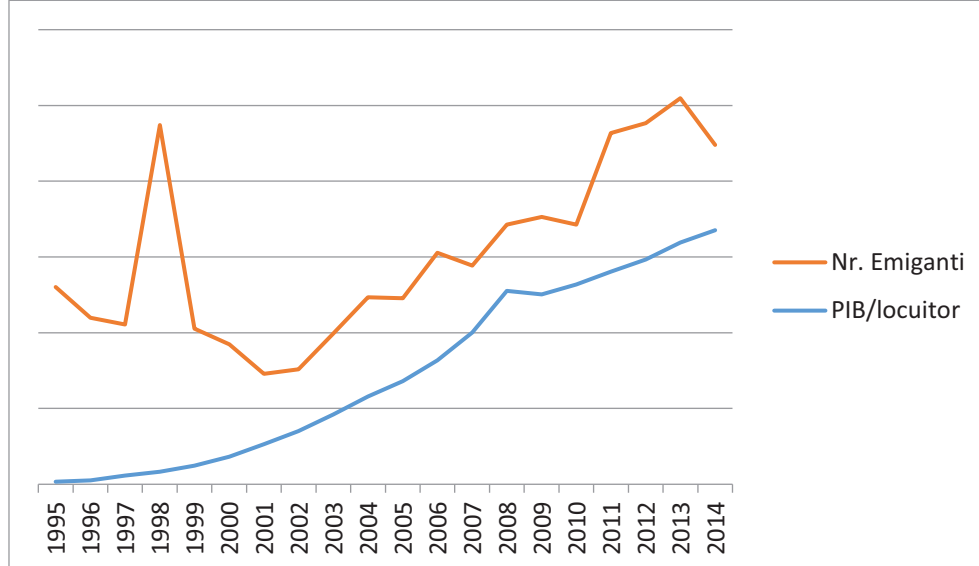
Table 11: GDP of Romania 1995-2014

GDP/capita	337,6	507,1	1139,4	1655,7	2470,4	3622,7	5280,5	7041,5	9212,8	11595,6
GDP	7656,7	11463,5	25689,1	37257,9	55479,4	81275,3	118327,2	152630	19876,1	248747,6
anul	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
GDP	290488,8	347004,3	418257,9	524388,7	510522,8	533881,1	565097,2	595367,3	637456	667577,4
GDP/capita	337,6	507,1	1139,4	1655,7	2470,4	3622,7	5280,5	7041,5	9212,8	11595,6

Source: http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=CON103I

Following table data, we see a steady increase in GDP levels, both in absolute form as per capita. If you overlap a graphic, in the same time period, the evolution of GDP / capita and the number of migrants, we get the following graphic:

Graphic 1: GDP/capita versus total emigration 1995-2014

Source: made by author

Blue line, that show us evolution of GDP/ capita has a constant upward trend in the analyzed period, only between 2008 and 2009 recorded a slight contraction; while the red line that shows us the evolution of the total number of immigrants has fluctuated. Moreover, we see that while the two lines have an upward trend, the relationship between these two variables is one of direct proportionality.

In conclusion, we cannot say that the evolution of GDP / capita is the factor that influences in a decisive manner, the intentions of the citizens to leave Romania. We believe however that the revenues Romanian citizens obtain domestically, have an influence on their decision to migrate, but we have to identify other causes of economic and social nature.

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FACTORS INFLUENCING THE EVOLUTION OF HIGHER EDUCATION GRADUATION IN ROMANIA, SPOTLIGHTING ECONOMIC STUDIES

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Abstract

The dynamics of the higher education access is one of the challenges that Europe has to face regarding education and labour market challenges. Romania has to deal with the expansion of higher education with its particularities. Regardless the specificities, expansion of higher education in Romania and in European countries, the number of higher education graduates have a constant upward trend at EU level. The population of graduates in Romania face the most dramatic developments: the number of graduates almost triples between 2003 and 2008, when it reached a peak due to the overlapping of the last generation pre-Bologna and the first generation Bologna followed by a veritable collapse in 2011 and 2012. According to European statistics, such catastrophic changes have not happened in any European country, even in crisis conditions. In this paper we investigate the evolution of higher education graduation in Romania comparatively with the European level rates. We highlight the fast expansion followed by contraction noted for most domains of study in Romania, nonetheless the most accentuated for economic sciences. Investigating the factors that influence this evolution we could neither support nor fully reject the impact of demographic decline of young population in Romania, nor the decline in graduation rates of secondary level education. These results are affected by the high percentage of non-traditional students in Romania, students that graduated high-school or have had other studies before 1990. These people wanted to complete their studies according to their occupation or in order to have access to better jobs, with better salaries. Also the adoption of the Bologna reform influenced the apparition of a peak in higher education graduation in 2008-2009. In the final section we focus on the evolution of number of students and graduates of Economic Studies from University of Oradea, proving that the same trends as at national level are present. However, in order to better understand future trends such an analyses should also integrate information regarding employability of graduates depending on domain or field of study (evolutions of the labour market), information at institution level such as endowments and prestige, international migration of secondary school graduates. Understating such trends at both national, field and institution level are bound to better prepare universities to face future challenges.

Keywords: Higher education, graduates, evolution, economic education
JEL Code: I21; I23, I28, J2