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International Relations

MIGRATION POLICIES AND EU ENLARGEMENT AS REGIONAL VALUE CHAINS

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ABSTRACT:
QUALITY OF GROWTH IS FOLLOWED BY MIGRATIONS. REGIONAL DEVELOPMENT MUST ANTICIPATE SUCH MOVEMENTS AND PREDICT A FURTHER DEVELOPMENT. THIS MUST HAVE NATIONAL AND LOCAL RESPONSES TO URBAN ECONOMIC CHANGE. WHAT IS URBAN GOVERNANCE AND HOW THIS IS RELATED TO POWER AND POLITICS? WHAT DO WE DO WITH ALL THOSE WHO REFUSE TO WORK AND INTEGRATE THEM IN OUR CULTURE? WE CAN LOOK IN THE PAST AT WHAT IT WORKED, REDISCOVERING SOME COMMUNIST PRINCIPLES LIKE COMMUNITY FARMS (CAP) AND LOCAL COMMUNITY GROUPS CAN HELP THE LOCAL ADMINISTRATIONS TO SAVE MONEY FROM THEIR BUDGET. WE CAN ALSO LOOK IN THE FUTURE AT CYBER PHYSICAL SYSTEMS (INDUSTRY 4.0) AND TRY TO BUILD MODELS. NOW WE TALK ABOUT DEPENDENCE MODELING AND RISK DYNAMICS BUT IN ALL THESE THINGS WE CAN FIND A LOGICAL ALGORITHM THAT CAN PREDICT THE FUTURE DEVELOPMENT. IF WE TRANSLATE THE MARKETS IN MATHEMATICS WE CAN ALSO BUILD ALGORITHMS THAT WILL HELP FURTHER MORE, TO DEVELOP CONNECTIONS WITH THE EMBEDDED SYSTEMS. CYBER PHYSICAL SYSTEMS (CPS) ENABLE THE PHYSICAL WORLD TO MERGE WITH VIRTUAL LEADING TO AN INTERNET OF THINGS, DATA AND SERVICES.

KEYWORDS: MIGRATIONS, VALUE CHAIN, REGIONS, CREATIVE INDUSTRIES.

1. INTRODUCTION

Migration influences the economy of Romania, aggravates social problems, affects the demographic balance. Through this article, we want to illustrate the dynamics from 1992 to 2017, in Romania, considering variables as gender, age and nationality as migrants, also the importance of new technologies, within the new type of industrial revolution called Industry 4.0, in developed countries, the value chain created and the effect that this development has on further migration, as brain or gain drain.

Value chain is a process of national or global interdependence, with product development, production, processing, trade, an end consumer, with sales and delivery services,

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with inputs as provision, outcomes and outputs. Access to education, for the migrants, can have an impact on the home country, as their returns in cash and ideas will contribute to local development, boosting the human capital and bringing new prospects. The higher level approach, thinking on the international clusters, will be brought through networking and new business approach.

Economic development, sustainable, deal with some risks as values, culture, political views, education, but has certain benefits from labor migration of the population, at the international level, as know-how, money, goods, ideas, brain drain of highly educated persons. For the countries of origin we can have a brain drain or brain gain, also the flows of money in the international currency will strengthen the credit market, providing, through returns and remittances, a boost for the local economy. Also, the continuous flows bring a new climate in investments (lobby), know how in technology acquired, capital that generates portfolio for investments, education and skills, understanding the dynamics brought by the new technology, adapt to change and bring improvement in the country of origin through new concepts, as pioneers in a developing process. Contacts, networking, cultural bridge building, access to information, can bring a higher value, more quickly, in the quality of services.

2. LITERATURE REVIEW

The European Commission[4], analyzes the post-crisis period and proposes a rethinking of the Europe 2020 strategy for the next financial programme, with the emphasis on the industrial policy. In the immediate aftermath of the crisis, the EU wanted, through the measures and implementation of the Treaty of Lisbon, to encourage new technologies and SME's initiatives, their internationalization, even if these measures entail high costs (Iter, Galileo), the value chain here adding collaborative research, internal market improvements and flexibility for new trade policies, access to private finance, human skills as capital, under the message "A strong industrial base is essential for a wealthy and economically successful Europe"[5]. Among these three dimensions of change, we have a social change (technological paradigm) with a focus on migrations and internal labor market mobility: France to Luxembourg and Belgium, Poland to Germany, Slovakia to Austria. There is a gap in skills and new industries, EU countries are trying to solve this through immigration strategies and, at the same time, integrate their own SMEs into value chains that are clustered and globalized, working from a regional level.

In this study conducted by Judith Nagy and Judith Olah[6], there is a study about the new value chain in which Cyber Physical Systems (CPS), CPSS, IoT are imperative to facilitate customer value creation. The competition shapes the market in demanding a change in technology, with high risks and costs. A change is also in the value chain approach to IoT, CPS and Industry 4.0, the trend towards virtual value chain, cluster or network, digital ecosystems. All this data needs to be stored and protected, industrial safety is a new field widely discussed at European level and an impediment for emerging companies to implement these new technologies.

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[4] European Parliament, *Industry 4.0*, (Brussels European Union, 2016), 20-24, 29-53.

[5] European Commission, "A Stronger European Industry for Growth and Economic Recovery", (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions, Brussel, 2012).

[6] Nagy Judit, Oláh Judit, Erdei Edina, Máté Domician, Popp Jozsef, "The Role and Impact of Industry 4.0 and the Internetof Things on the Business Strategy of the Value Chain—The Case of Hungary", *Sustainability 10* (2018): 1-25.

"Innovation is the engine of the economy"[7], is the logical thread of the study by Susan Helper and Raphael Martins. The adaptability of a people is a proof of intelligence in survival, this concept being found at the level of both social sciences and SME's economics. There are complementarities, such as incentive structure (finance), labor (labor force) and new technologies as sensors and machine learning that will affect value migration and creation, as patterns, in manufacturing, inside and outside across firms. They talk about changing organizational architecture, increased teamwork and horizontal communication, with a good system of performance evaluation.

In the paper written by the German Federal Ministry of Economics[8], there is a connection between the labour flows and value chain map, supplier processes, migrants are actors in this dynamic development through movement. There is an important connection, in the host country of migrants, between markets, institutions and products. Also, the concept involves selection, analysis, process design, meso and macro level conditions and blending other approaches, with a geography interdependence of different locations, creating global value chains, the new development that M.Porter was written about, in the '80s. In Germany they have a high number of SMEs owned by foreign, migrants, entrepreneurs (364.000, in 2005) and the level of new business (start-ups) is 2.9 %, more frequent than those owned by local population.

3. METHODOLOGICAL CONSIDERATIONS

Data was provided, for the international comparison, from the EUROSTAT database, for the period 1990-2015. At the national level, the analysis processed data from TEMPO database[9], for the last 25 years, respectively for the period 1992-2017. In 2008, our national economy has had a new classification of activities, revised to ensure a 1:1 ratio with the International Standard Classification of Economic Activities developed by the United Nations Statistical Commission[10]. We compared the eight regions in Romania, have had a survey on other nations from Western Europe, as destinations for migrants, also split the data between 1990-1992 (period after the national revolution) and 1993-2017, as a continuous trend, trying to find a change in dynamics, as an econometric model.

4. DYNAMICS CONSIDERING THE NUMBER OF MIGRANTS IN ROMANIA, BETWEEN 1990 AND 2017

The data presented were extracted from the existing TEMPO-online database, on the National Institute of Statistics' (INSSE) website and processed using the EXCEL and EVIEWS software. Data on permanent migrants for the period 1990-2017 were processed. According to the definitions, from INSSE: "Home changing migrants are people (of Romanian citizenship) migrating abroad. Migration is the action by which a person renounces his or her domicile in Romania and establishes it on the territory of another state."

[7] Susan Helper, Raphael Martins and Robert Seamans, "Value Migration and Industry 4.0: Theory, Field Evidence and Propositions", *TPRI* (2017), accessed March 12, *Technology& Policy Research Initiative*, 58.
[8] GIZ, German Federal Ministry for Economic Cooperation and Development: *Creating value through migration, Guidelines for technical cooperation for promoting value chains in the context of migration*, (Bohn and Eschborn, Germany: Deutsche Gesellschaft fur Internationale Zusammenarbeit, 2013).
[9] On the Romanian National Institute of Statistics website – INSSE, accessed on March 2019.
[10] NACE Rev2 ISIC Rev4 document, standards.

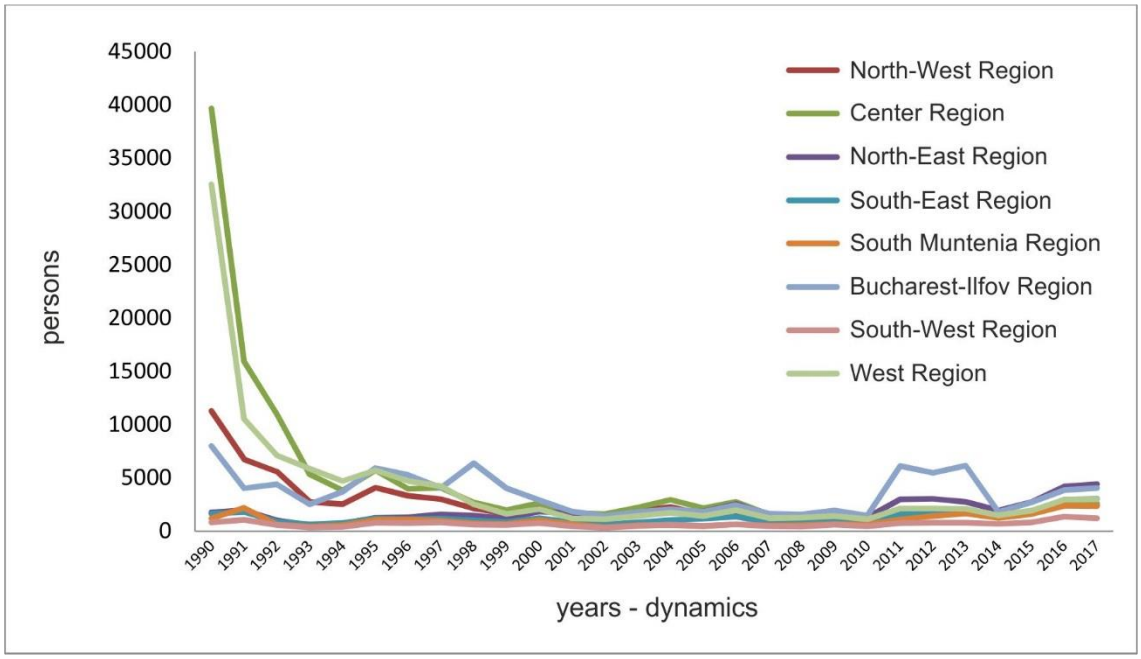

Figure 1 : Dynamics considering the number of permanent migrants, on Regions, in Romania
Source: processed data from TEMPO-online database and INSSE's website

The number of migrants dropped sharply after 1990, in 1991 their number was half that of 1990. In the early 1990s, most migrants left the Center Region, the West Region, and the Northwest Region. In recent years, migration it's mainly from North-East (19%), Bucharest-Ilfov (17.5%) and South-East Region (13.1%). The gender imbalance has been maintained over time, with the number of women being higher than that of the men leaving. If at the beginning of the 1990s the share of women, in migration, was up to 56%, in the period 2004-2010 the share of women exceeded 60% and then gradually decreased reaching 20.9% in 2017.

At the county level, we can say that at the beginning of the analyzed period, most people left Brasov, Sibiu, Mures, Caras-Severin, Timis and Bucharest counties. In the last 2 years, the counties of Iasi, Brasov, Timis, and Bucharest are in discussion, with an increasing trend for migration.

Considering the nationality, as point of view, we can say that most that chose to change their residence outside Romania were the persons of German and Hungarian nationality. This phenomenon ceased after 1997.

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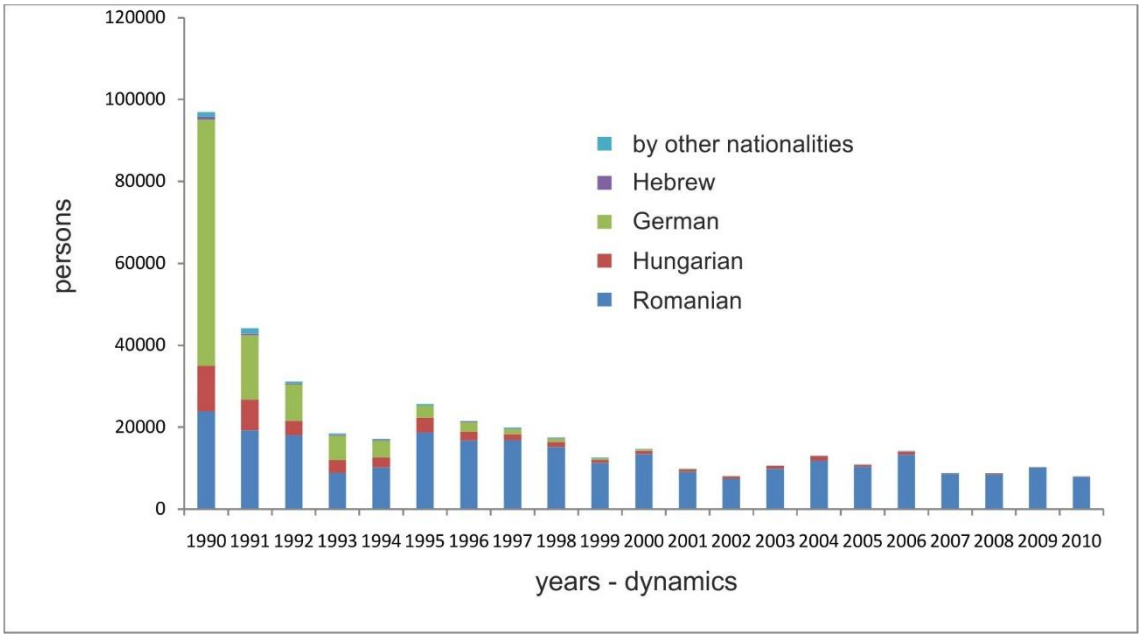

Figure 2 : Dynamics considering the number of permanent migrants, on nationalities
Source: processed data from TEMPO-online database and INSSE's website

The countries where the migrants went were Germany, Hungary, the United States of America and Austria. In terms of jobs, Italy and Spain have become an increasingly attractive destination in the last 10 years, in 2017 15% and 24% of migrants, respectively, choosing one of the two countries as home. If in 1990, 68% of the definitive migrants headed to Germany, in 2017 their share reached 18%.

Analyzing the age structure of migrants, we can see for the 25-74 age group that if in the early 1990s, they were leaving abroad predominantly from four regions (Central Region - 34.6%, West Region - 23.1%, North- West - 16.8%, and Bucharest-Ilfov - 15.6%), in 2017 these shares are approaching the average for all regions (the coefficient of variation decreasing three times for the two analyzed years).

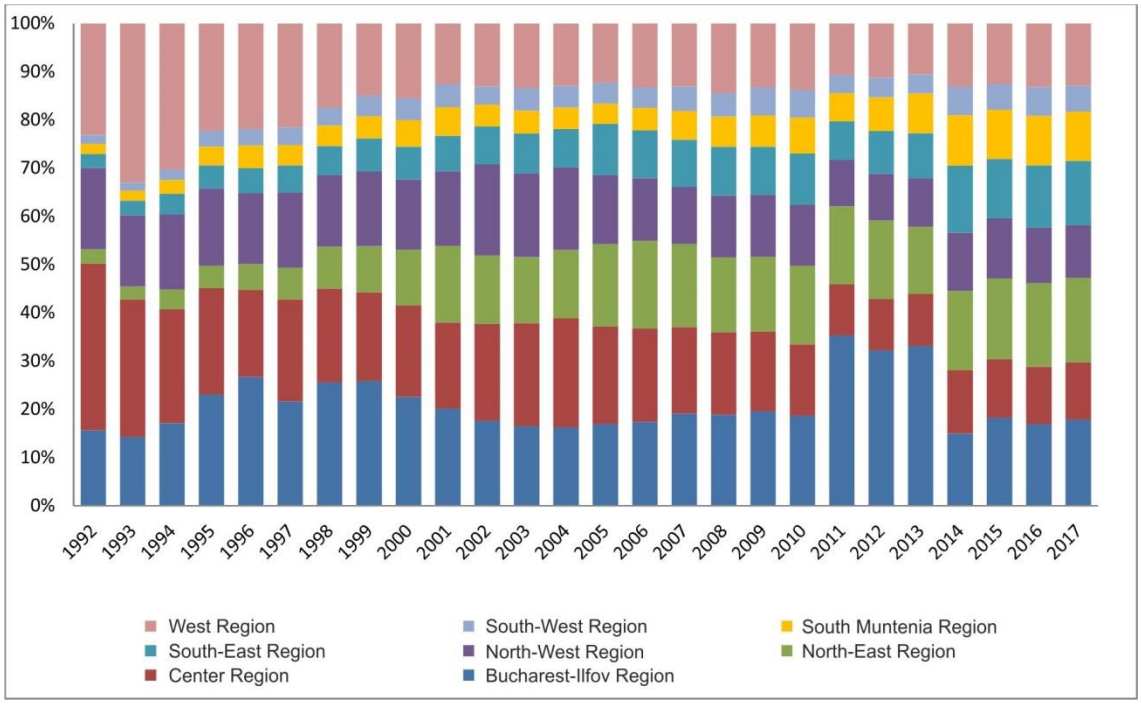

Figure 3 : Dynamics considering the number of permanent migrants, age 25-74 years, on Regions, in Romania
Source: processed data from TEMPO-online database and INSSE's website

In 2017, at the level of the North-East Region, there is a 5% difference between the share of 15-24-year-old migrants and the share of the 25-74 age group.

Table1: Share of permanent migrants by regions of Romania, in 2017 -%

Source: processed data from TEMPO-online database and INSSE's website

	1992		**2017**	
	Age 15-24	**Age 25-74**	**Age 15-24**	**Age 25-74**
Bucharest-Ilfov Region	10.67	15.68	16.08	17.88
Center Region	31.22	34.61	9.43	11.84
North-East Region	4.47	2.92	22.56	17.54
North-West Region	22.90	16.88	9.16	10.94
South-East Region	3.09	2.88	13.00	13.32
South Muntenia Region	1.79	2.11	11.52	10.19
South-West Region	2.44	1.80	5.52	5.34
West Region	23.41	23.12	12.73	12.95

People in the two age groups, analyzed, are slightly different: while young people go with their parents or for studies, those over 25 years of age generally go for a better job or living conditions.

In order to see whether the phenomenon of definitive external migration had an impact on the economy of the region from which people go, a linear regression model has been developed, that has as the variable explained the gross domestic product and as explanatory variables the number of emigrants and the number of registered unemployed:

$$GDP = \beta_0 + \beta_1 * emigrants + u \text{(Model 1)}$$
$$GDP = \beta_0 + \beta_1 * emigrants + \beta_2 * unemployment + u \text{(Model 2)}$$

The processed data were extracted at the county level (NUTS 3) [INSSE] for gross domestic product 2016, the number of registered unemployed and the number of migrants who changed their residence. To begin with, a unifactorial model was created in which the number of migrants was introduced as the explanatory variable, and the number of unemployed was then added, afterwards.

Table 2: Statistics / Results for applied models
Source: processed data from TEMPO-online database and INSSE's website

	Model 1	Model 2
migrants	-1.2452	-3.04789
unemployment	-	1.569553
intercept	18881.01	4230.275
R^2	0.000634	0.079012
F*statistic*	0.025384	1.672921

The coefficients obtained were not statistically significant, p-value> 0.05 and no F-statistic values were higher than E-theoretical. Therefore, the two models can notprovide trust in order to describe the relationship between the indicators. The study should be continued taking into account other indicators describing economic realities.

The person's domicile (residency) in Romania is the address on which he declares that he has the main residence, past the identity document (current ID's as CI / BI), as evidenced by the state administrative bodies. Emigrants are the Romanian citizens who have settled their permanent residence abroad. Age is expressed in completed years (for example, a person aged 24 years and 11 months is considered to be 24 years of age)[11].

[11] For more details: http://www.insse.ro/cms/.

5. CONCLUSIONS

The forth industrial revolution changes the nature of the activities, which also leads to redistribution of the workforce, both territorial and within activities. Developing countries are losing their workforce, highly educated in science but with less know-how in new emerging technologies, brain drain phenomena. Some activities disappear and new ones are emerging at an accelerated pace. Whoever does not keep pace with new technologies loses competitive advantage and becomes a consumer, making it a security issue for the states[12]. If there was a massive migration boost on 1990 to 1992, from Romania to Western Europe or the US, after 2009 the trend has gain equilibrium, the economic crisis showing weaknesses in large economies. Through the new technologies that are present in Romania, through clustering and openness to the European Union markets (2007), the educated active population in Romania can have now benefits in our country, working with international markets. Through certain measures of market opening, such as encouraging SME's and their internationalization, cluster development and rethinking of the value chain concept, its global implementation, we can balance Brain Drain and introduce Brain Gain.

New technologies bring a migration also on the specialization market, the labour force is continually adapting, this shift influence also regions of Romania, having now new growth poles that attract population from villages.

We can bring more value, more income quickly with services, but we have to consolidate the primary base of economy and that is production of goods, agriculture and energy. The EU will enlarge for safety and will split in three categories because of the economic performance reasons, probably we will have again “Mare Nostrum”. Value chains in Industry 4.0 and Creative Industries will change the cities and will bring regional clusters and interdependence.

[12] Flavius Cristian Mărcău, Mihaela Andreea Ciorei, “The vision about international security at the biggining of the XXI century”, *European Scientific Journal*, April 2013 edition vol.9, No.11, 301-311

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