

ANALYSIS OF THE DATA SOURCES FOR SIZING THE PHENOMENON OF INTERNATIONAL MIGRATION IN THE CONTEXT OF THE MAJOR EXODUS OF ROMANIAN LABOR FORCE

Gabriela PRELIPCEAN*¹
Paul-Panfil IVAN²

Abstract: *Being a complex and multi-criteria phenomenon, the international migration can have a lot of different meanings, which suppose different scopes and methods of estimating various data, depending on the hypotheses and research objectives pursued. In the last decade the mass-media also gave an increased importance to the phenomenon and in the era of fake news, it led to the fact that the magnitude of the phenomenon was often communicated differently from the real situation or the existing statistics. Even though there is a great diversity of data sources that could be used to estimate international migration flows, these are not directly oriented to measure migration, so great difficulties in terms of data comparability occur very often. In Romania the phenomenon of international migration has taken a large scale, the country being on the first places worldwide in terms of labor force exits to destination countries, but, practically, the Romanian authorities have very less information regarding the residence of Romanian citizens abroad and, implicitly, no data is collected regarding the real volume of the migration phenomenon. This paper aims to inventory the available data sources regarding international migration from Romania and, as much as possible, to propose solutions by which this phenomenon could be better quantified to support the development of effective migration policies. The research methodology consists in the theoretical analysis of data sources and indicators that measure the migration phenomenon in order to identify a possibility to quantify the volume of the migrant population by proposing a model that calculates the potential migrant workforce calculated as a difference between the labor resource and the employed population.*

Keywords: *labor force, potential migrant workforce, international migration, migration statistics, migration flows, migration policies.*

UDC: 314.74:331.556.46(498)

JEL Code: F22, O15, J61

Introduction

In order to analyze the possibilities of dimensioning the phenomenon of migration, it is important to understand the amplitude that this phenomenon takes on a global level and the essential need to create efficient and thoroughly substantiated migration policies, even though one of the major research hypotheses of this paper is that it is currently impossible to quantify the number of migrants from Romania, so there is a need to quantify at least a

* ¹ Gabriela PRELIPCEAN, Professor PhD „Stefan cel Mare” University of Suceava, gabriela.prelipcean@usm.ro, ORCID: <https://orcid.org/0000-0002-2584-1733>

*² Paul-Panfil IVAN, PhD Student „Stefan cel Mare” University of Suceava, paul.ivan@usm.ro, ORCID: <https://orcid.org/0000-0002-0281-0256>

theoretical amount of population that may migrate, in order to have at least one dimension of the phenomenon.

Migration is a global phenomenon that is gradually increasing in scope, impact and complexity. Today, practically all countries of the world are simultaneously countries of destination, origin and transit for migrants. Migration flows that have become traditional over time are complemented by new waves, generated by economic, demographic, political changes or social conditions, and these new trends affect both the size and structure of the migrant population, as well as the economies and societies in the countries of origin and destination.

Few international economic deals and agreements affect the living standards or financial stability of developing countries to the same degree as migration. As a result, the views on this phenomenon bear the imprint of the field from the perspective of which the analysis is made. On the one hand, for some it is a priority to strengthen and promote the positive impact that migration has, as an opportunity for individuals to increase their productivity in the interest of the country of origin, while others see migration as a safe method and, on a case-by-case basis, quick to let the human resources of a country effectively flow to other horizons and in the economic interest of other horizons.

The reality of the last years and even the last months has shown that migration and current migratory flows require a series of specific measures, whether it is the leakage of personnel with rare or high skills and competences or whether we are talking about extreme phenomena such as forced migration or the illegal one. These measures consist in migration policies that cannot be designed in the absence of coherent migration data and specific statistics.

At the international level, it can be seen that the concerns for studying the phenomenon of migration, identifying specific features or current trends, as well as the proposal followed by the adoption of measures and policies, have grown exponentially. This interest has intensified especially in the last 50 years and since the recent past, migration has become a hot topic for the mass media, further developing the circuit of unscientific information about migration. Practically, migration has become a subject of wide interest for the common citizen, not only for researchers or decision-makers and the mass media and social networks, as factors without which we can no longer imagine the current society, have played a major role in maintaining and dissemination of information.

Obviously, this dissemination of information has shown public opinion that migration is an issue of global interest and that the need for strategies and policies is an obvious and necessary one. Migration is a complex phenomenon and its impact is felt differently in different contexts, which makes generalizations difficult. Also, there is still a need for new tools and information to be able to outline a package of policies to de-escalate some of the problems or a series of concrete recommendations to positively develop this phenomenon. Migration causes the emergence of migrant communities. Their presence is beneficial for the facilitation of economic and cultural exchanges, the support of national interests within and, why not, the promotion of national identity.

1. The issues of migration data limitation

In the home country, the unemployment rate falls and wages rise, reducing imbalances. At the same time, new drivers of economic growth are emerging: the transfer of migrants' income and the improved skills of returning workers. In the receiving country, the pool of human resources increases, leading to a slowdown in capital and wage growth. In the end, migration stops, theoretically, when the wage level is the same in both countries. From this point of view, it is considered that migration can only be a positive process for both parties and, in the long term, there are no winners and losers.

In the absence of the migration movement, the able-bodied population could not be absorbed by the mother country to fit into the labor market. The unemployment rate may decrease as a result of the possibility for citizens to find a job in the territory of another state. This reduces the pressure on the unemployment insurance budget and on the social assistance system in the country of origin. With the experience gained, the migrant worker becomes more valuable to the labor market of the mother country and can even be an employer for other people, contributing to the decrease of unemployment.

At the international level, although there is a great diversity of data sources that could be used for estimating international migration stocks, these are not directly oriented towards measuring migration, which leads to a wide variation of practices in this field. The inconsistency of data sources and the lack of harmonization of methods for calculating/estimating international migration stocks generate significant difficulties in terms of data comparability.

In fact, limitation of migration data is a widely discussed issue in academic literature. The migration data are underreported and studies show that many migrants, especially those who are undocumented or illegal, are often reluctant to provide information about themselves, leading to underreporting or inaccurate reporting of the number, characteristics, and needs of migrants (Koser and Pinkerton, 2017). Also, the lack of standard definitions and categories of migrants has been identified as a major limitation of migration data. Different countries and organizations use different definitions and categories, making it difficult to compare and aggregate data across countries and regions (Betts and Collier, 2017).

Some countries and organizations do not collect comprehensive data on migrants or collect data only on certain categories of migrants, such as refugees, leaving out other categories, such as temporary workers or family members. This can lead to incomplete or biased data (Anderson, 2010). At the European level there are studies analyzing innovative sources of data and how those can be compared to traditional data sources and how the prospects of innovative data transition towards systematically are contributing to official statistics and policymaking (Joint Research Centre of EC, 2022). This need for data is present also at the global level, several major issues concerning the availability of data, consistency in definitions of migration, and a general absence of many of the important

migration categories needed to understand the movements, being identified on the Asian continent (Raymer, J. et al., 2019).

The importance and the issues of the migration data concerned in the last years the Romanian researchers too, most of the papers being focused on finding alternatives and better tools to assess the phenomenon like big data that can be seen as digital traces of humans generated by using mobile phones, online services, online social networks, devices within the internet of things, from which valuable information can be extracted. Different questions on migration like migration flows and the economic and cultural effects on the migrants could be answered by combining traditional and new big data (Sîrbu et. al, 2020). The other research topics are related to lack of reliability of migration statistics due to the methodology of the process of statistical data collection itself (Oțoiu and Țițan, 2015).

Collecting and sharing data about migrants can raise issues of confidentiality and security, as it involves sensitive information about individuals and their movements, which can be misused or manipulated. The issue of confidentiality and security in relation to the collection and sharing of migration data is a topic of ongoing discussion and debate among scholars and practitioners in the field of migration studies.

In the meantime, data on migrants can be difficult to access or unavailable, especially in countries with limited resources or in areas affected by conflict or disasters. This can limit the ability to develop evidence-based policies (Haas, 2014).

2. Romanian policies for migration exodus

Today we can say that migration is one of the most important social and economic problems in Romania. One of the main reasons why people choose to leave the country is related to poor economic conditions. Romania went through periods of economic crisis and political instability, which led to an increase in unemployment and poverty. As a result, many Romanians chose to migrate in search of work opportunities and a better life abroad.

Other reasons for migration include lack of educational opportunities, discrimination and corruption, as well as the desire to improve their financial situation and secure a safer future for themselves and their families.

According to the OECD data, in 2020, the total number of migrants in Romania was estimated at 3,7 million, which represents approximately 19% of the country's total population. In terms of international migration, Romania was one of the EU countries with the largest number of emigrants in the period 2010-2019. In 2020, it was estimated that approximately 3.2 million Romanians lived abroad (OECD, 2022).

In Romania's case migration can have both positive and negative effects on the economy and society. In terms of the economy, migration can help improve the balance of payments and reduce unemployment by increasing demand for services and products (Dennett, 2014). Migration can also bring benefits to the Romanian economy through remittances sent by emigrants to their families remaining in the country.

However, migration can also have negative effects, such as the loss of human and intellectual capital, increased social and economic costs of care for those left behind, and family fragmentation. Also, migration can lead to a decrease in the number of active people in the economy, which can negatively affect Romania's economy in the long term.

Both at the European level and at the level of Romania, there are a series of migration policies and measures, although, in the case of Romania, there are no concrete statistical data and exact measurements of migration and implicitly of the population exodus, although the extent of the phenomenon is one evident.

Perhaps the most important decision in the recent history of migration was the removal of political barriers to free movement but unfortunately the respect for the right to free movement of persons was implemented much later in former communist countries and even today this is not it is fully accomplished. The concern of EU countries regarding migration issues is particularly evident recently and it can be said that it has become an unavoidable topic for national governments.

Member States have full decision-making capacity regarding:

- the total number of migrants who can be admitted to the country to look for a job;
- all final decisions regarding migration requests;
- the rules regarding long-term visas – stays for periods longer than three months;
- the conditions for obtaining residence and work permits when no rules have been adopted at the EU level.

In order to manage this major exodus of the labor force, Romania currently has a series of policies and strategies to manage the phenomenon of migration, both in terms of emigration and immigration. These policies include:

- National Immigration Strategy 2021-2024: this strategy was developed by the Government of Romania and aims to improve the management of migration and asylum in Romania, by creating a more efficient and transparent system for managing these problems (National Immigration Strategy 2021-2024, 2021);
- Migration and Asylum Law: this regulates the rights and obligations of migrants and refugees in Romania. This includes rules for access to jobs and health services, as well as procedures for obtaining asylum rights or temporary protection (Government Ordinance no. 102/14.07.2005, 2005);
- migrant reintegration policies: the Government of Romania has developed several policies and programs to help migrants reintegrate into Romanian society after returning from abroad. These include vocational training programs, financial support for setting up businesses and help to find jobs;
- bilateral agreements with other countries: Romania have a number of bilateral agreements with other countries to regulate the mutual migration of citizens. These agreements provide rules and procedures for access to jobs and health services in both countries;

- cooperation with the European Union: Romania cooperates closely with the European Union in terms of migration and asylum policy. This includes participating in solidarity and support programs for refugees and migrants.

In general, Romania's migration strategy focuses on improving migration and asylum management, protecting the rights of migrants and refugees, and helping them reintegrate into Romanian society after returning from abroad. However, there are still many challenges in managing migration in Romania, including preventing irregular migration and combating human trafficking. Currently, there are difficulties in estimating the stock of emigrants, meaning the number of people who, at a given moment, have their usual residence abroad for at least 12 months. These difficulties are mainly generated by the complexity of the migration phenomenon, as well as by the limited availability of data sources. These challenges cannot be correctly addressed in the absence of the exact data and coherent statistics.

Directive no. 2004/38/EC on the free movement and residence of Union citizens and their family members provides in Article 8(1) that „Without prejudice to Article 5(5), for stays exceeding three months, the host Member State may require Union citizens to register with the competent authorities.” (Directive no. 2004/38/EC, 2004)

The record of Romanian citizens abroad is currently regulated by Law no. 248/2005 on the regime of free movement of Romanian citizens abroad, with subsequent amendments and additions that states that during their stay abroad, Romanian citizens have the obligation to inform the nearest diplomatic mission or consular office of Romania, in case of establishing residence or domicile abroad.

Although Romanian law requires Romanian citizens living abroad to register at embassies/consulates, they do not declare their residence in the respective country, so there is no information available about the usual residence of Romanian citizens abroad. There are no advantages to declaring usual residence, but there are also no sanctions for not declaring it.

3. Data and Methodology

The research methodology involves the theoretical analysis of data sources and indicators that measure the migration phenomenon in order to identify a possibility to quantify the volume of the migrant population. The research consists in an empirically analysis of Romania and uses secondary data identified in international statistics providers and starts from the hypothesis that it is currently impossible to quantify the number of migrants from Romania, but it is possible to estimate, at least theoretically, a potential migrant population.

Another hypothesis of this work refers to the fact that following the use of the proposed calculation model, a value at least equal to the estimates from the mass media or from national communiqués regarding the volume of migrants will be obtained.

According to EU regulations on migration statistics, the usual residence criterion and the 12-month threshold are used to measure international migration flows, which determine whether a person is considered an immigrant to or emigrant from a certain country. In some EU countries, information on the time criterion is not available, and therefore, they do not comply with the time criterion in transmitting data to Eurostat. (CE Regulation, 2007)

A series of difficulties regarding the estimation of international migration stocks are related to the use of multiple criteria for establishing migrant status. The countries, depending on the availability of data, delimit the persons included in the stocks of emigrants/immigrants, according to the following criteria: time, habitual residence, country of birth, country of citizenship.

Regarding the time criterion, the usual definition requires a period of at least 12 months for the statistical assignment of migrant status. However, countries also use other time periods in their national definitions of migration. The habitual residence criterion is closely connected with the time criterion, because it requires that the person considered a migrant change his habitual residence on the territory of another state, for at least 12 months. (CE Regulation, 2007)

The country of birth is another criterion by which a person can be identified as a migrant. However, the estimation of the stock of immigrants cannot be made exclusively on the account of the number of people whose country of birth is different from the country of residence (in this case, the country being Romania). Citizenship is another criterion that delimits the scope of international migration. Estimating migration stocks based on citizenship involves risks of under/overestimation of the data (Eurostat, 2021).

Also, for Romania, as for most of the EU member states, it is difficult to estimate the stock of emigrants, one of the difficulties being generated by the free movement of people from one state to another, within the EU and there is no single definition of circular migration and, by implication, circular migrant, and therefore it is impossible to quantify this category of migrants or to take it into any account.

In Romania, neither the authorities nor the city halls or other institutions provide specific procedures/norms for Romanian citizens leaving the country to declare that they are leaving abroad for a period of time. There is no standardized form that a Romanian citizen can complete (if desired) and submit to signal that they are leaving Romania. Under these circumstances, collecting and analyzing data on migration is very difficult to achieve. It should be noted that the need to store data on population movements does not restrict/censor the individual's right to freedom of movement, but would represent an advantage at least from a statistical point of view.

The National Institute of Statistics (INS) provides data about the emigrants with a change of residence which are defined as persons (of Romanian citizenship) who emigrate abroad and about the temporary emigrants that are people who emigrate abroad for a period of at least 12 months. Emigration means the action by which a person who previously had habitual residence on the territory of Romania ceases to have habitual residence on its territory for a period that is or is expected to be at least 12 months. (INS Statistics, 2022).

In the figure below we can observe the migration flows from Romania according the INS data between 2010 and 2021 based on administrative data but it is very obvious that the data availability is very limited and the phenomenon is underestimated.

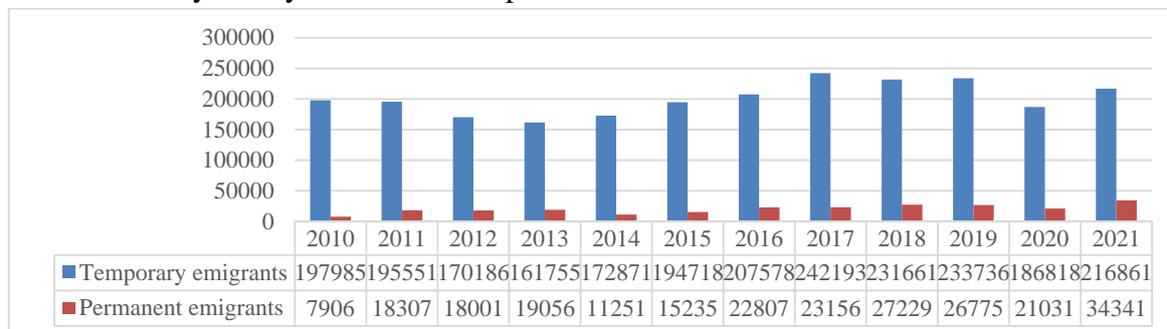


Figure 1. Migration flows from Romania (2010-2021) by INS

Source: <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>

The National Institute of Statistics (INS) annually estimates and transmits to Eurostat data on immigrant and emigrant flows, but, regarding migration stocks, estimating them is a challenging endeavor to achieve an acceptable level of estimation quality. The reality of recent years has confirmed this fact for other EU countries as well, for which estimated stocks have undergone large revisions. International migration statistics are also disseminated by other international statistical organizations, such as the Organization for Economic Co-operation and Development (OECD) and the United Nations (UN). The practices of these organizations are different from those of Eurostat, and the results disseminated are evidently different.

As we can see in the Figure 1, there are differences between the migration data from EUROSTAT and OECD even though the same variables were selected (country of birth: Romania, year: 2010-2021, country of destination – selected by the data available: Belgium, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Latvia, Luxembourg, Hungary, Netherlands, Austria, Portugal, Slovenia, Slovakia, Finland, Sweden, Iceland, Norway, Switzerland, United Kingdom).

The stock of migrants is affected by the fact that, in most situations, especially in the countries of the EU space, the cancellation of the registration of people who were part of the migrant population does not take place (a situation found even in countries where there are population registers). Thus, a person could be registered in two European Union countries at the same time. The migrant stock can have different meanings, in the sense that no clear distinction is made between the actual migration stock (in the statistical sense) and the diaspora (people who migrated at a given time, but who have now naturalized in host country) (Eurostat, 2021).

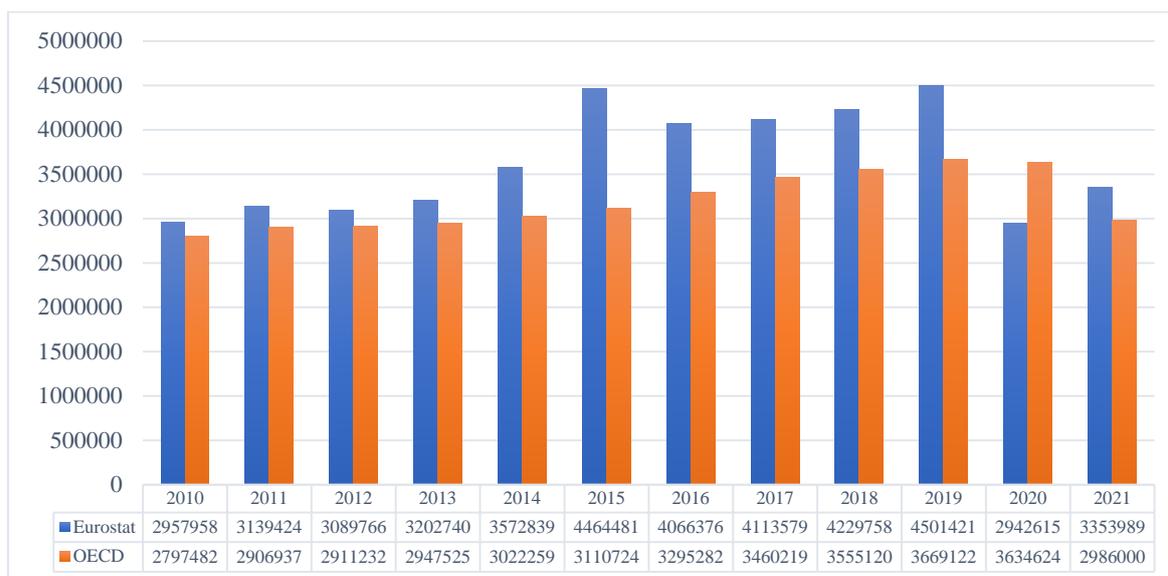


Figure 2. Migration flows from Romania (2010-2021) by EUROSTAT and OECD

Source: ec.europa.eu/Eurostat, stats.oecd.org

Among the negative effects of migration (with which Romania also faces) can be mentioned the deficit on the labor market, increasing the probability of brain drain and putting more and more demographic pressure on the country.

Because it is practically impossible to determine the amount of labor that Romania loses annually through migration, this paper proposes a paradigm shift in the analysis of international labor migration, in the sense that, instead of relying on difficult to obtain and limited data regarding the flows of Romanian immigrants, it starts from the already existing statistical data and tries to propose a more accurate calculation method of potential migrant workforce, sizing somewhat the loss of labor force that Romania would have, if all these people leave. Practically, we can assess a labor force value on that Romania cannot rely on at a given moment, regardless of whether this population is migrated or not, even though the full migration perspective is impossible.

The proposed model uses the already existing statistical data regarding the labor resource and the employed population. Labor resources represent that population category that has all the physical and intellectual capacities that allow them to carry out useful work in one of the national economic activities. Labor resources include: the population of working age, able to work, as well as people under and over working age in activity (<http://statistici.insse.ro/>, 2023).

The civilian employed population includes, according to the labor force balance methodology, all people who have an income-generating occupation, which they normally exercise in one of the activities of the national economy, being included in an economic or social activity, based on a contract of work or independently (on own account) in order to obtain income in the form of wages, payment in kind, etc. The categories of persons included are: employees who work in one of the activities of the national economy in units of the public sector (full state and public of national interest), mixed, private, cooperative, public

sector, owners– managers of private units – who use salaried labor to carry out the activity, self-employed workers, unpaid family workers (<http://statistici.insse.ro/>, 2023).

The labor statistics from Romania are more exact because starting from 1996, the survey on the labor force in households is carried out quarterly, as continuous research, thus allowing the obtaining of conjunctural data on the size and structure of the labor supply and the highlighting of seasonal phenomena that manifest themselves on the labor market. The survey results are available quarterly and annually (average data) (INS, 2020). In fact, the INS itself mentions in one of reports that even though the official statistics in Romania make permanent efforts to improve the quality of the estimates, by using multiple sources of data, both statistical and administrative sources, the emigration and migration in general are extremely difficult to measure, especially in the community space, where the movement of people is free (INS, 2021).

4. The Model and Findings

The model introduces the concept of potential migrant workforce, this being calculated as the difference between the labor resource and the employed population (civilian). The model is presented below:

$$PMW = Labor\ Resource - Employed\ Population$$

Potential Migrant Workforce (PMW) represents the loss of labor force that a country would have in case of full migration and below you can find the results of the calculation for Romania's case. Of course, that this perspective of full migration is unrealistic but at least these data can be based on more accurate statistics and, if we relate it with the INS data regarding migration, we observe that the PMW includes already the temporary or permanent emigrants. Also, in terms of labor statistics categories, the PMW comprises the unemployed population, the population in professional education and other categories of population (inactive population), which corresponds to the population most likely to emigrate. There are studies that have tried to profile the Romanian emigrant: an active person, from a poor area or regions that have benefited from a strategic geographical positioning, usually women, between 18 and 44 years old, generally high school educated. They are housewives, pupils/students or qualified workers, with incomes of a maximum of 150 RON/month/person or no income. (Stoian et. all, 2017).

A percentage of the weight of the PMW indicator in the labor resource was also calculated in order to have an image of the potential migrant workforce ratio compared to the entire labor resource giving the fact it is based on this.

From the table above we can observe that the potential migrant workforce has declined since 2013 (5448.76 thousand of people), the evolution being totally based on the growth of the employed population only, because the decrease of the labor force was almost insignificant. The decrease was with more than 27% which was a major benefic change for the Romanian workforce. We can observe that the percentage from 2021 is

worrying even though the labor resource was not changed in the last year and it is very close to the values from 2010-2013.

Table 1. Potential Migrant Workforce of Romania (2010 – 2021) - thousands

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Labor Resource	14047.6	14047.7	14033.7	13997.9	12597.7	12481.1	12562	12432.5	12238.9	12198.3	12216.8	12201.4
Employed Population	8712.82	8528.14	8605.05	8549.13	8613.73	8535.38	8448.77	8670.55	8688.53	8680.32	8521.05	7755.48
PMW	5334.77	5519.55	5428.64	5448.76	3983.96	3945.71	4113.22	3761.94	3550.36	3517.97	3695.74	4445.91
PMW Ratio	37.98%	39.29%	38.68%	38.93%	31.62%	31.61%	32.74%	30.26%	29.01%	28.84%	30.25%	36.44%

Source: Made by the authors, based on data from <http://statistici.insse.ro/>

Comparing with Eurostat and OECD data, it is obvious that PMW values are higher because they refer and are analyzed upstream at the country of origin and not downstream at the country of destination as are the data from the international statistics. Also, the data from the international statistics are obviously incomplete due to the fact that not all destination countries can be taken into account and the data collection limitations have a permanent character.

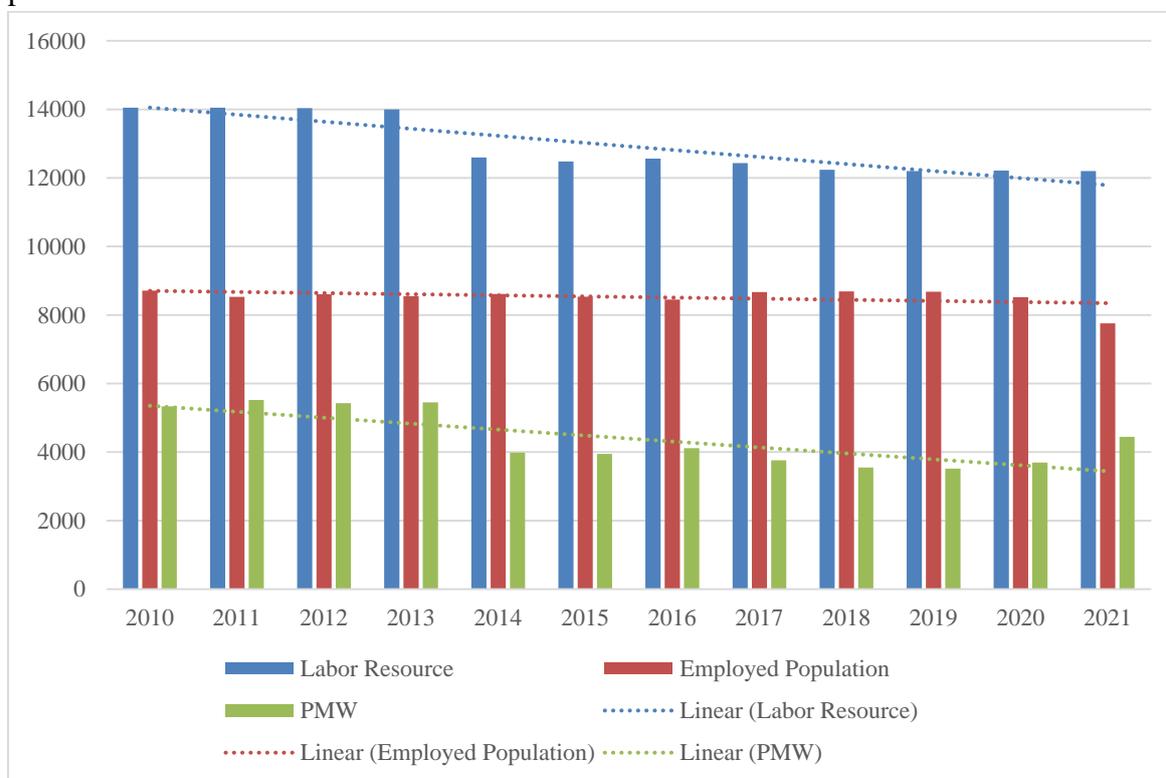


Figure 3. Evolution of the Romanian PMW between 2010 and 2021

Source: Made by the authors, based on data from <http://statistici.insse.ro/>

As we can observe in the figure above even though the labor resource was almost constant after 2018, due to the fact the employed population has decreased the potential migrant workforce has increased getting very close to the values before 2014.

The highest values for the potential migrant workforce were registered in the years 2010-2013 with a peak in 2011 counting approximately 5428640 people. Giving the fact the labor resource was almost constant, the increase of the PMW is based most on the decrease of the employed population, most probably as a result of the global financial crisis. Even though the trendline of the PMW shows a decline in the span of 11 years (2010-2021) there is another decrease for the employed population in 2021 (a pandemic consequence) influencing the increase of the PMW to 4445910 people and the highest ratio in 8 years (36.44%).

Conclusions

The construction of this model represents an early stage of assessing the risk of labor exodus and it represents an instrument that does not measure migration but measures the labor force that could be lost at a certain point, this information being useful for the development of migration policies. Most of the data available regarding the migration flows are collected downstream at the country of destination and not upstream at the country of origin as this model does, measuring the potential migrant population before the phenomenon takes place.

Although it is a good tool for evaluating the risk of labor force exodus, the model also has some limitations that will require in the future to correct the calculation method for more accuracy: the civilian employed population does not include military cadres and persons assimilated to them, prisoners and employees of political and public organizations and it does not take into account the population that is not able to work. Also, the situation of the unemployed workforce is very volatile. The proposed model practically does not measure the volume of the migrant population focusing strictly on the labor force that is or is not already migrated.

In the future, for the improvement of the model, all categories of the population that could significantly influence the data will be taken into account. Also, the research will continue with a series of correlations with recent phenomena such as the pandemic and the war in Ukraine, but also with the migration policies of the state and last but not least with the natural growth rate.

References

- Anderson, B. (2010). Migration, immigration controls and the fashioning of precarious workers. *Work, Employment & Society*, 24(2), 300-317. <https://journals.sagepub.com/doi/pdf/10.1177/0950017010362141>
- Betts, A. & Collier, P. (2017). Refuge: transforming a broken refugee system. *Penguin*. <https://www.penguin.co.uk/articles/2017/03/refuge-extract>
- Dennett, A. (2014). Quantifying the Effects of Economic and Labour Market Inequalities on Inter-Regional Migration in Europe – A Policy Perspective. *Appl. Spatial Analysis* 7, 97–117.
- Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004L0038>
- Eurostat. (2021, September 9). *Population Glossary*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Category:Population_glossary
- Haas, H. (2014). Migration: A cross-cutting issue. *World Social Science Report 2013: Changing Global Environments*, 100-103. <https://www.oecd.org/fr/publications/world-social-science-report-2013-9789264203419-en.htm>
- INS (2020). *Raportul de Calitate asupra Anchetei Forței de Muncă în Gospodăria (AMIGO)*. https://insse.ro/cms/files/Rapoarte%20de%20calitate/Amigo/RO_AMIGO_rap_calitate_2020.pdf
- INS (2021). *Tendințe sociale*. Editura Institutului Național de Statistică. https://insse.ro/cms/sites/default/files/field/publicatii/tendinte_sociale_2.pdf
- Joint Research Centre (J.R.C.) of European Commission. (2022). *Data Innovation in Demography, Migration and Human Mobility*. Publications Office of the European Union. https://publications.jrc.ec.europa.eu/repository/bitstream/JRC127369/JRC127369_01.pdf
- Koser, K. & Pinkerton, J. (2017). Researching forced migration: Critical issues and directions, *Journal of Refugee Studies*, 2, 173-193. <https://academic.oup.com/jrs/article/30/2/173/2981912>
- OECD. (2022). *International Migration Outlook*. Paris. <https://doi.org/10.1787/30fe16d2-en>
- Ordonanță de urgență Nr. 102 din 14 iulie 2005. [Guvernul României]. (2011). *Monitorul oficial*, 774. <https://igi.mai.gov.ro/wp-content/uploads/2022/10/ORDONANTA-DE-URGENTA-nr.-102-din-14-iulie-2005.pdf>
- Oțoiu, A. & Țițan, E. (2015). Seeing the Hidden Part of the Iceberg: Gauging the Real Dimension of International Migration. *Statistika - Statistics and Economy Journal*, 95(3), 31-38. <https://www.czso.cz/documents/10180/20550321/32019715q3031.pdf/765792cb-47da-4273-9918-af18c5f0d4ed?version=1.0>
- Raymer, J., Guan, Q., & Ha, J. T. (2019). Overcoming data limitations to obtain migration flows for ASEAN countries. *Asian and Pacific Migration Journal*, 28(4), 385–414. <https://doi.org/10.1177/0117196819892344>

- Regulation No 862 of 11 July 2007 on community statistics on migration and international protection and repealing Council Regulation (EEC) No 311/76 on the compilation of statistics on foreign workers. (2007). [European Parliament. Council]. *Official Journal of the European Union*, L 199/23. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32007R0862>
- Sîrbu, A., Andrienko, G., Andrienko, N., Boldrini, C., Conti, M., Giannotti, F., Guidotti, R., Bertoli, S., Kim, J., Muntean, C. I., Pappalardo, L., Passarella, A., Pedreschi, D., Pollacci, L., Pratesi, F., & Sharma, R. (2021). Human migration: the big data perspective. *International Journal of Data Science and Analytics*, 11, 341–360. <https://doi.org/10.1007/s41060-020-00213-5>
- Stoian, M., Lădaru, G. R., & Marin, F. (2017). Unemployment and the Migration of the Romanian Labour Force. Causes and Effects. *Amfiteatru Economic*, 19(46), 901-917. https://www.amfiteatruconomic.ro/temp/Articol_2668.pdf
- Strategia națională din 19 august 2021 privind imigrația pentru perioada 2021-2024. [Guvernul României]. (2021). *Monitorul oficial*, 839. https://igi.mai.gov.ro/wp-content/uploads/2021/10/strategia_nationala_din_19_august_2021.pdf ;
- www.ec.europa.eu/eurostat/databrowser/view/MIGR_IMM3CTB__custom_6172508/default/table?lang=en, <https://immigration-portal.ec.europa.eu/general-information/who-does-what=en>, www.statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table
- www.stats.oecd.org/#