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## MIGRATION OF THE WORKING POPULATION IN DÂMBOVIȚA COUNTY BY AGE GROUPS

**Abstract.** This article analyzes the migratory movement of the working-age population in Dâmbovița County, with a particular focus on both definitive emigration and permanent immigration during the 1992-2023 period. The study aims to identify the magnitude, structure, and long-term implications of these demographic flows by age group and to evaluate their impact on the local social and economic environment. Migration data were processed for the active population aged 15–64, since this category represents the most dynamic and productive component of society and is directly linked to the labor market, demographic renewal, and regional development. The research also includes a ten-year forecast (2024–2034), based on statistical modeling of past trends and demographic indicators, allowing the estimation of future population movements and their potential effects. These projections are essential for anticipating challenges related to labor force availability, economic competitiveness, and social cohesion in the county. The article therefore examines the migration balance, the intensity of emigration and immigration by age categories, and the evolution of these indicators over time, highlighting both the risks and opportunities that migration generates for Dâmbovița County in the next decade.

**Keywords:** emigration, immigration, forecast, working population

### 1. Introduction

The definitive migration movement in Dambovita (Figure 1) county was and is an important movement in the dynamics of the demography of Dambovita county. In the period 1992-2023, emigrated 5294 people aged between 15-64 years (people capable of work), practically emigrating well-trained labor force, many of them are high school, university, postgraduate or professional graduates, so a very well-trained category of work.

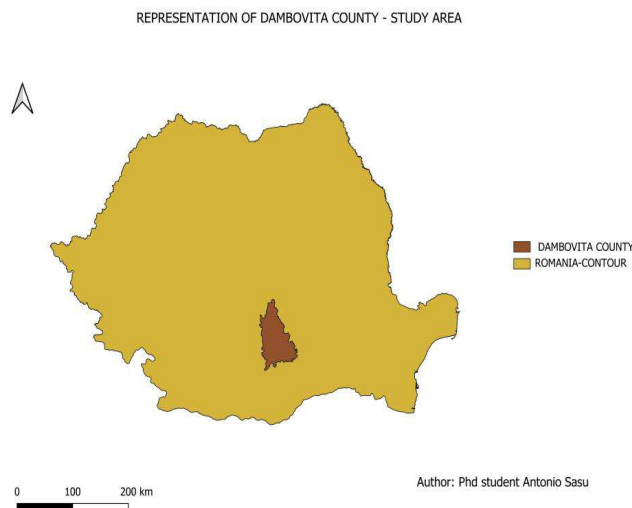
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How do I know this? In the period 2022-2024, a case study was conducted by the author on graduates intending to emigrate definitively, out of 223 respondents' answers, more than 135 graduates plan to stay permanently off-limits (study conducted on a sample size of 385 graduates, 95% confidence level, 4.5% error margin); emigrate workforce that could bring added value to the economy of Dambovită county, cultural, social, educational or private sector life in the county.

The able-bodied people in the county choose to emigrate permanently, this can be seen also in the average number of employees by counties, this number having a negative dynamic, this number, from 147255 employees in 1992 to 85988 in 2023.

Final immigration is low in the county, with 3,183 people immigrating. The migration balance is negative (-2777 people) at county level.



*Figure 1. Representation of Dambovită county*  
*Source: processed data in QGIS 3.45, EPSG:3844-Pulkovo*

## 2. Literature Review

Based on the census data from 1977, Dumitru Sandu (1984) mentioned the migration directions of the population from Dambovită county, this being mainly rural-urban, that is, from village to city, or urban-urban,

from small towns, mono-industrial (emphasis of the author), to large, developed ones, especially towards Bucharest.

OECD (2025) shows that the working age population (15-64 years) in Romania will decrease by ~15% between 2024 and 2040. It also stresses that emigration has contributed significantly to the reduction of the workforce.

OSW CENTRE FOR EASTERN STUDIES (2025) examines the persistent emigration trend of young people (14-35 years) and the consequences on the domestic workforce.

Daniela Ghio et al (2022) makes a European analysis on the impact of migration on the working age population ("working-age") at territorial level; reveals how migration and cohort turnover affect the age structure.

Andreea-Elena Vorovenci & Dan Dragomirescu (2025) makes a long-term analysis of the ageing of the Romanian population; it includes the structure by age group and the influence of migration.

Bogdan Suceava (2019) mentioned in his book Dambovita County, especially the city of Gaesti, as the place where many intellectuals could have left for the U. S. At the level of Dambovita County, no research has yet been done on the emigration and immigration of the working-age population or emigration and gender immigration

The National Institute of Statistics (INSSE\_TEMPO Online) provides statistical data on migration and definitive immigration.

### 3. Methodology

The methodology used to draft the article was as follows: the TEMPO Online statistical database, section A.3 –Migratory movement of the population and Immigrants with permanent residence change. The selected age groups were those able to work, respectively from 15 years to 64 years (at the level of Dambovita county), and the selected periods were those available in the statistical database, that is, the interval 1992-2023.

The data were saved in the CSV document, tables with the above-mentioned data, as well as graphs of different types were created. Regarding the forecast, this was done in Microsoft Excel, through the Forecast function.

The forecast was made for the period 2024-2034, that is, the next 10 years.

#### 4. Data, Results and Discussion

The definition for permanent emigrants offered by INSSE is the following: "Immigrants with the change of residence are persons of Romanian citizenship who emigrate abroad. Emigration is the action by which a person renounces his domicile in Romania and establishes his domicile on the territory of another state".

The definition for definitive immigrants offered by the same Institute is the following: "Immigration is the action by which a person renounces his domicile on the territory of another state and establishes his domicile in Romania".

Different Romanian geographers have treated the phenomenon and defined it as follows.

The Dictionary of Human Geography (George Erdeli and the collective, 1999) defines migration as "a process by which individuals change their place of residence definitively or temporarily. Geographer Teodor P. Simion (2011) mentions the following regarding the phenomenon, saying that "the established term on the mobility of the population is migration, which is external or internal, individual or collective with various motivations".

As for the age group 15-19 years, that is, very young, there is a very high probability that among them there are young people who have not started high school, high school, high school, or who have not yet finished high school, but there may be those who have not attended a professional school or have not enrolled in college. The number of young people who emigrated permanently in the period 1992-2023 was 788 people out of the total of 5,924 emigrants, that is 13.30% (Figure 2).

Regarding definitive immigration for the same age category, 190 people emigrated from a total of 3,183 immigrants (1992-2023), representing 5.96%, so, more people of this age choose to emigrate than immigrate. This includes the particular context of Dambovit County, the labor offer, the salary level offered, the urban and rural logistics offer, cultural and educational.

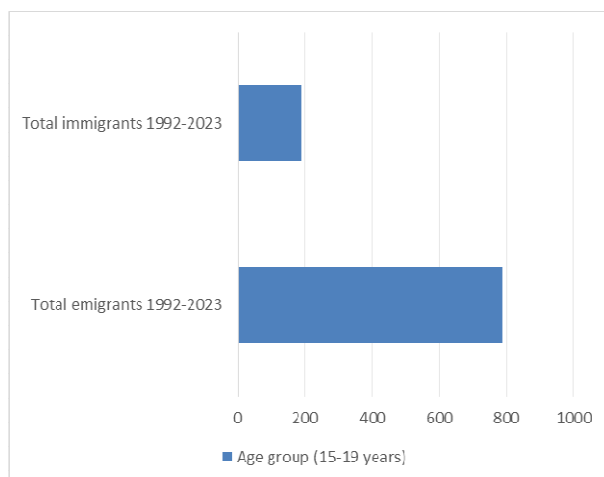


Figure 2. Total emigrants and immigrants, age group 15-19 years

Source: INSSE TEMPO Online – processed data

For the age group 20-24 years, the number of permanent emigrants in the range 1992-2023 was 692 (Figure 3) of the total 5924, representing 11.68%; defined immigrants in this age group total 504 immigrants out of the total 3,183 immigrants, representing 15.83%, so Dambovita County is much more interesting for this age category than for the previous age group.

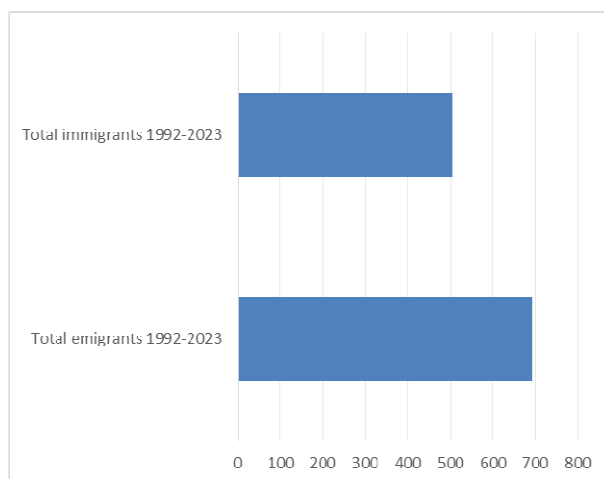


Figure 3. Total emigrants and immigrants, age group 20-24 years

Source: INSSE TEMPO Online – processed data

The age group 25-29 years totals in 31 years (1992-2023) 1016 people out of a total of 5924 (Figure 4); it is the age group with the highest number of permanent emigrants, having the highest share (17.15%), the same dynamic is preserved for immigrants, it is the age category that chose the highest proportion (16.08%)-560 immigrants choose to settle in Dambovită county in 31 years.

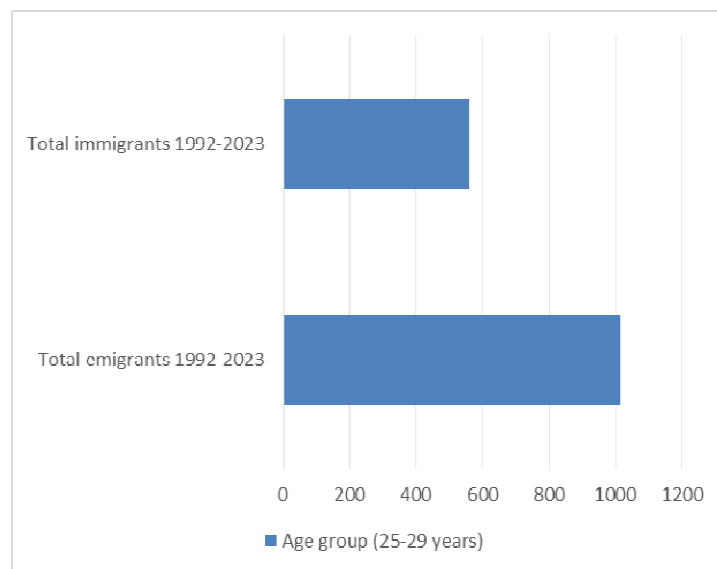


Figure 4. Total emigrants and immigrants, age group 25-29 years  
Source: INSSE TEMPO Online – processed data

The age group 30-34 years total 918 people who emigrated permanently (15.49%), and in the case of permanent immigrants the share was 15.83%-504 immigrants (Figure 5). We're talking about roughly equal percentages, but the total population values that enrolled in the migration movement differed (918 emigrants out of a total of 5,924 compared to 504 immigrants out of a total of 3,183 immigrants).

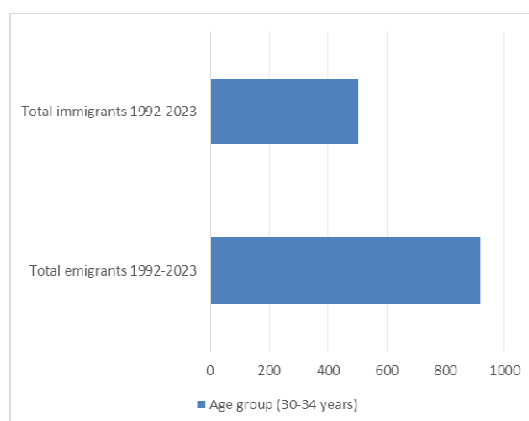


Figure 5. Total emigrants and immigrants, age group 30-34 years

Source: INSSE TEMPO Online – processed data

As regards the age group 35-39 years, it totals 904 permanent emigrants (15.25%) and 375 immigrants (11.75%) – Figure 6. These five age categories are very important in the demographic dynamics of Dambovita County, practically should have remained in the county well-trained young people, future students, master students, doctoral students, etc, workers or other important socio-professional categories. Considering that the average of births in Romania is 26.9 years (INSSE, Demography), we can consider that the birth rate has decreased because a lot of women emigrated between 1992-2023.

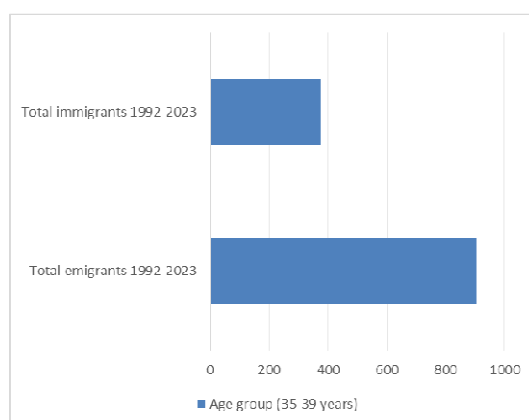


Figure 6. Total emigrants and immigrants, age group 35-39 years

Source: INSSE TEMPO Online – processed data

The differences between emigrants and emigrants for the above five categories are as follows (Figure 7).

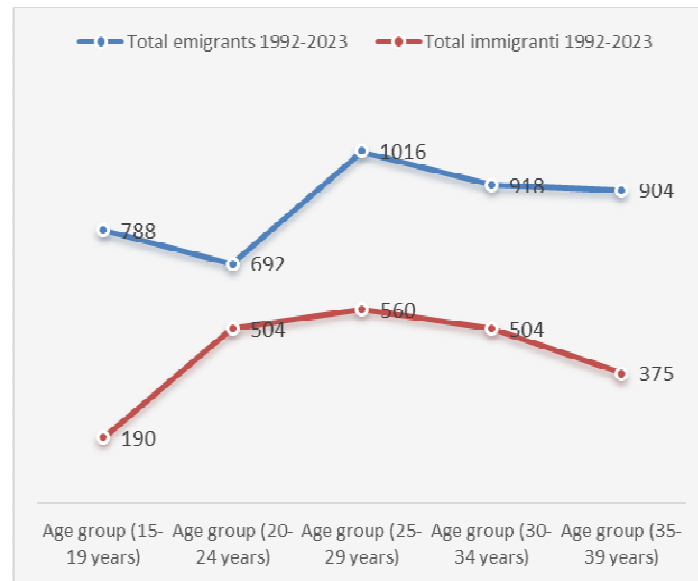


Figure 7. Differences between immigrants and immigrants (total 1992-2023)

Source: INSSE TEMPO Online – processed data

For the following age groups, namely 40-44 years, 45-49 years, 50-54 years, 55-59 years, 60-64 years, the situation is as follows (Figure 8, Tables 1 and 2):

- 644 Defining emigrants (age group 40-44 years) and 359 definitive immigrants
- 497 Defining emigrants (age group 45-49 years) and 257 definitive immigrants
- 270 Defining emigrants (age group 50-54 years) and 217 definitive immigrants
- 137 Defining emigrants (age group 55-59 years) and 119 definitive immigrants
- 58 Defining emigrants (age group 60-64 years) and 94 definitive immigrants.



Table 1

**Number of Migrants Defining in Dambovita County, Age Group 40-64 Years**

Age group (years)	Number of migrants defining
40-44	644
45-49	497
50-54	270
55-59	137
60-64	58

Source: processed date

Table 2

**Number of Definitive Immigrants in Dambovita County, Age Group 40-64 Years**

Age group (years)	Number of definitive immigrants
40-44	359
45-49	257
50-54	217
55-59	119
60-64	94

Source: processed date

Regarding the last age group (60-64 years) it can be seen that there are many more immigrants, this having a bad consequence for the county: more people come to the county who will need pensions in the near future, who have not paid to the state budget and will need social support because of their old age.

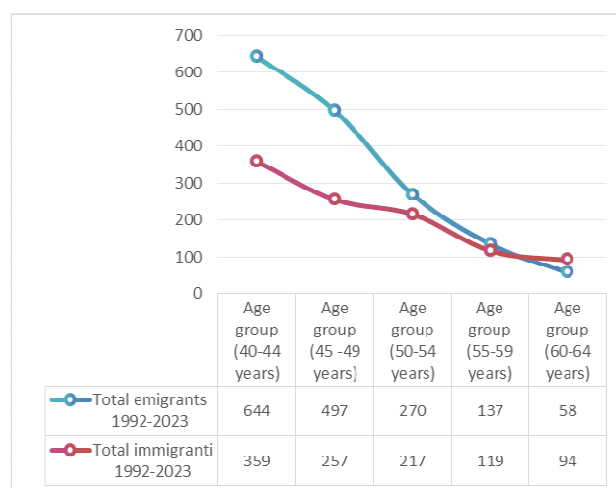


Figure 8. Differences between immigrants and immigrants (total 1992-2023)

Source: INSSE TEMPO Online – processed data

The migration balance sheet for Dambovita County (respectively the number of immigrants coming to a country (-) the number of migrants leaving their country) is negative, this means that there are more who emigrate from Dambovita county than those who come to the county. The data looks like this (Figure 9 and Table 3).

It can be seen that the number of those who leave their country, in this case their county, is higher (5924 people), and the number of those who come to the country, in this case, the county of Dambovita is smaller (3,183 people), indicating a negative migration balance for Dambovita County (-2,741 people). So Dambovita County loses in 31 years 2741 people able to work.

Table 3

Migration Balance in Dambovita County (1992-2023)

Emigrants Dambovita (total 1992-2023)	Immigrants Dambovita (total 1992-2023)	Migration balance-Dambovita
5924	3183	-2741

Source: processed data

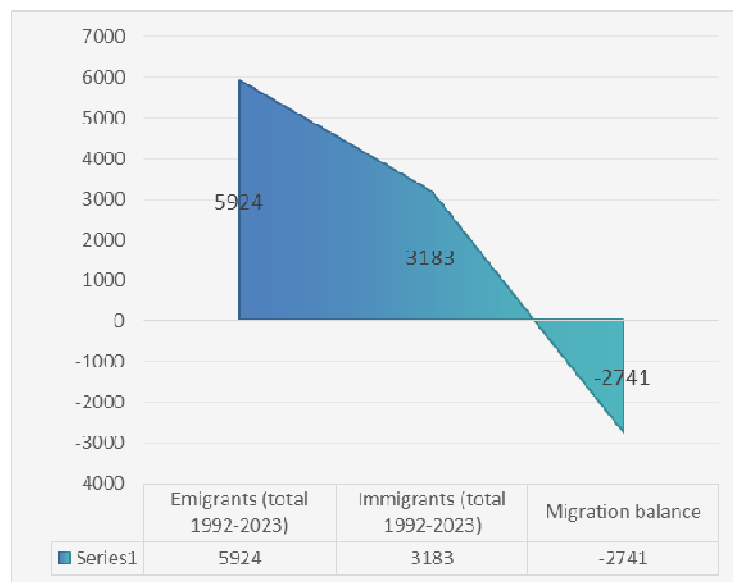


Figure 9. Migratory balance sheet

Source: processed data

The forecast (Figure 10, Tables 4 and 5) for the next ten years (2024-2034) regarding definitive emigration and definitive immigration at the level of Dambovita County is as follows:

- for the age group 15-19 years (985 emigrants and 228 immigrants)
- for the age group 20-24 years (632 emigrants and 581 immigrants)
- for the age group 25-29 years (857 emigrants and 269 immigrants)
- for the age group 30-34 years (817 emigrants and 306 immigrants)
- for the age group 35-39 years (918 migrants and 181 immigrants)
- for the age group 40-44 years (873 emigrants and 173 immigrants)
- for the age group 45-49 years (615 emigrants and 112 immigrants)
- for the age group 50-54 years (371 emigrants and 95 immigrants)
- for the age group 55-59 years (197 emigrants and 51 immigrants)
- for the age group 60-64 years (60 emigrants and 38 immigrants)

Table 4

**Forecast (2024-2034) for Emigrants in Dambovita County**

<b>Age group (years)</b>	<b>Number of emigrants (forecast)</b>
15-19	985
20-24	632
25-29	857
30-34	817
35-39	918
40-44	873
45-49	615
50-54	371
55-59	197
60-64	60

Source: processed data

Table 5

## Forecast (2024-2034) for Immigrants in Dambovită County

Age group (years)	Number of immigrants (forecast)
15-19	228
20-24	581
25-29	269
30-34	306
35-39	181
40-44	173
45-49	112
50-54	95
55-59	51
60-64	38

Source: processed data

From these data, the following conclusions can be drawn:

The forecast for the next years in terms of emigrants is much higher than it was in 31 years, so in 10 years the growth is much higher, that is, a value of 6325 emigrants. The prognosis for immigrants is much lower than the values have been in the last 31 years, only 2034 people will emigrate to Dambovită, so the migration balance for the next ten years will deepen.

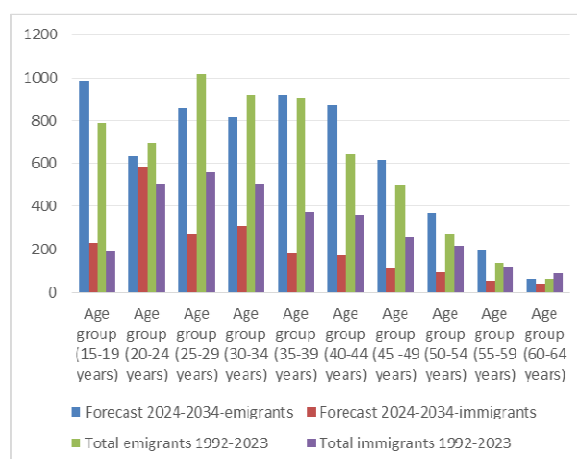


Figure 10. Forecast for the next ten years (2024-2034) as regards definitive emigration and definitive immigration at Dambovită county level

Source: processed data

## Conclusions

Emigration to Dambovita county in the period 1992-2023 was higher than immigration from the same interval, namely 5,924 permanent emigrants and 3,183 definitive immigrants, this gave a negative migration balance.

The most exposed age group to this phenomenon is the 25-29 years old group, basically those who have completed their studies, or who are looking for a job, who may also have children or are in the process of drawing up a family. The forecast shows changes in the age pyramid for those who emigrate; in the next ten years (2024-2034), those in the 15-19 age group will emigrate the most; dambovita County will receive people from the age group 20-24 years in the next ten years.

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