

The Occupational Structure of Romania

NICOLAE CIANGĂ, GEORGE-BOGDAN TOFAN,
ADRIAN NIȚĂ, BOGDAN-NICOLAE PĂCURAR

Introduction

THE OCCUPATIONAL structure of a country's population represents one of the most important geodemographic components, which, based on the social-economic development, registers the most significant quantitative and qualitative changes, with powerful effects on other components, but is at the same time influenced by them as well. A certain percentage of the stable population is the so-called *active population*, meaning the involved population (employed) and the unemployed (V. Surd, 2001); the demographic category without its own income is called *inactive* or *dependent population* (students, retirees, stay-at-home workers, and other categories). We will therefore use this classification and map it for Romania, at county level, thus outlining its territorial distribution.

Methodological Aspects

THE TERRITORIAL description of the social-economic structure of Romania's population in 2011 is based on the statistical data from the National Institute of Statistics, more precisely its <http://www.recensamantromania.ro/rezultate-2/>, *Volume III: Stable population - socio-economic structure* data base. The statistical data was then processed, making possible the easier identification of the essential characteristics of the matter.

The census data also include *the professional status* of the employed population (employees, owners, self-employed, members of cooperatives/agricultural associations, household workers, other situations), *the economic sectors* (financial and nonfinancial organizations, state administration, NGOs), as well as the employed population according to *the educational level* (tertiary, secondary, primary, no schooling).

Likewise, we utilized an indicator for the effects of population aging on social-economic life and demographic evolution – *the index (rate) of demographic dependence*. It emphasizes the ratio between the “dependent” population (young people below 15 years of age, older adults, 60 years and older) and the economically active population (15–59 years).

Theoretical and methodological guidance came from a series of human geography papers and books, tackling population structures, studies published in Romania (Pop, P. Gr., Maier, A., Ciangă, N., 1986; Edeli, G., Braghină, C., Frăsineanu, D., 2000; Raboca, N., Ciangă, N., Păcurar, Al., 2001; Iațu, C., Muntele, I., 2002; Ciangă, N., Rațiu, Ramona, 2003; Păcurar, Al., 2006; Niță A., 2007; Pop, P.Gr. 2007; Ilinca, N., 2008; Păcurar, B.N., 2011; Cocean, P., Niță, A., Dombay, Șt., 2013; Tofan, G.B., 2013), as well as abroad (Clark, C., 1945; Harm, J de Blij, 1977; Bailly, A., Hubert, B., 1982; Bailly, A. 1991; Max, D., 1991; Bailly, A., Hubert, B., 2001; Carles, C.V., 1998; Claval, P., 1974).

Results and Discussions

1. The general occupational structure of Romania, at the 2011 Census

AT THE 2011 Census, *the active population* consisted of 9,180,337 people, or 45.6% of the total population of Romania (20,121,641 individuals). In 2002, this segment numbered 8,851,831 people and represented 40.8% of the total number of inhabitants. This increase was influenced by the presence of the “decree generation”, born following the 1969 decree prohibiting abortions. The effect of this wave is illustrated by the increase of the activity index from the 30–34 years age group, in 2002, to the 40–44 years age group, nine years later.

After analyzing the active population structure on the basis of the economic structure (table 1), we observed first and foremost a low unemployment rate, below the European Union (EU) average (9.5% in 2011, according to Eurostat), pointing out however that the percentages registered in Romania do not include people who exceeded their period of assistance and did not find a job. Unfortunately, there were high percentages of employees in the primary sector, partially due to poor mechanization in agriculture. Moreover, most rural areas exhibited a low percentage of people employed in other sectors of the economy. According to Eurostat, at EU level, Romania has the highest percentage of employees in the primary sector, well above the other EU members; none of the EU states exceeds 15% of the population employed in this sector, while values above 10% can be found solely in countries where agriculture holds a significant share of the gross domestic product (GDP), such as Greece or Poland.

Looking at the gender structure of the active population, based on the 2011 census data, there was a higher national representation of the male population (55.6%) compared to women (44.4%). The situation was due to the higher percentage of females in three categories of the inactive population: students (the percentage of women who pursue long term studies, characteristic to the service industry, was higher), retirees (high life expectancy of women compared to men), and housewives.

The *inactive population* decreased since 2002 by 1,887,839 people, meaning that, at the last census (2011), there were 10,941,304 inactive individuals (54.3% of the total population). The explanation is the constantly dwindling number of pupils and students, due to the low birth rates of the last 30 years, and to retirees, those individuals from the “lost” generations born during and immediately after the Second World War.

Romania	Total stable population	Total active (%)	Active population					Unemployed (%)
			Employed population per sector of the economy					
			Total employed (%)	Primary sector (%)	Secondary sector (%)	Tertiary sector (%)	Quaternary sector (%)	
Total	20,121,641	45.6	92.7	29.2	23.5	43.2	4.1	7.3
<i>Urban</i>	<i>10,858,790</i>	<i>46.9</i>	<i>91.3</i>	<i>6.1</i>	<i>30.5</i>	<i>56.8</i>	<i>6.6</i>	<i>8.7</i>
<i>Rural</i>	<i>9,262,851</i>	<i>44.1</i>	<i>94.4</i>	<i>57.1</i>	<i>17.7</i>	<i>24.2</i>	<i>1.1</i>	<i>5.6</i>

TABLE 1. Percentage and structure of the active population in Romania, in 2011 (urban and rural)

In terms of population groups (table 2), pupils and students registered very low numbers, due to reduced birth rates, making it the main cause of population aging risk. Moreover, there was a small percentage of pensioners in rural areas, not because the number of older people was lower than in cities, but due to the fact that the rural elderly benefit from different indemnities, mostly agricultural, and not from pensions.

In what gender is concerned, the inactive female population had the highest percentage, 57.2% compared to men, who registered 42.8%, as, in the category of students, pensioners, and stay-at-home moms, the presence of women is, by definition, higher.

Romania	Total stable population	Total inactive (%)	Inactive population			
			Pupils/Students (%)	Pensioners (%)	Stay-at-home workers (%)	Other situations (%)
Total	20,121,641	54.4	27.3	39	10.9	22.8
<i>Urban</i>	<i>10,858,790</i>	<i>53.1</i>	<i>27.7</i>	<i>43.6</i>	<i>9.3</i>	<i>19.4</i>
<i>Rural</i>	<i>9,262,851</i>	<i>55.9</i>	<i>26</i>	<i>33.9</i>	<i>12.5</i>	<i>26.6</i>

TABLE 2. Percentage and structure of the inactive population of Romania, in 2011 (urban – rural)

1.1. The professional status of the current employed population

The data of the 2011 census also present the professional status of the current employed population (8,507,759 people). Employees were by far the largest category, with the highest percentage (69.8%, 5,935,129 people), most employees being specialized in different domains (1,252,372 people). The situation was due to the lack of experience and know-how in establishing and running a firm, following roughly 50 years of centralized economy. Next are the self-employed (17.1%, 1,454,317 people, most of them – 1,087,543 people – working in agriculture, forestry, and fishing), and the family workers – unpaid (11.8%, 1,006,542 people, where over 80% are also qualified in agriculture, forestry, and fishing).

Lower percentages were found for business owners (1.2%, 98,151 people, out of which 38.4% in the service industry), other situations (0.1%, 10,634 people), and members of an

agricultural society or cooperative (below 0.1%). Striking is the low percentage of business owners but also the fact that most of them are found in the tertiary sector, where both the investments and the risks in starting a business are lower than in the secondary sector.

In urban areas (4,653,439 people), employees reached a percentage of 92.3%, self-employed workers 5%, business owners 1.6%, while in rural areas (3,854,320 people), employees had a percentage of 42.5%, followed by self-employed with 31.6%, family workers 24.8% (the last two categories being comprised mostly of farmers), and business owners with 0.6%.

1.2. Employed population by economic sector

Out of the entire employed population of 8,507,759 people, the highest number of employees were found in financial and nonfinancial organizations (5,085,085 people, 59.8%), with the 40–44 age group registering the highest percentage (17.8%, 906,441 people), followed by people working in households (2,435,456 people, 28.6%), most being comprised of the 60 to 64 age group (11.1%, 270,236 people). Next come the government or public administration employees (924,010 people, 10.9%, most being 40–44 years of age (18.8%, 173,415 people), while the personnel working for non-profit organizations reached a number of only 63,208 people (0.7%), mostly young, between 30–34 years (16.8%, 10,588 people).

In urban areas, most people were employed in financial and nonfinancial institutions (78.9%, 3,673,149 people), followed by the administration (15%, 696,381 people), household workers (5.3%, 244,740 people), and non-profit organizations (0.8%, 39,169 people). In rural areas however, the situation was quite different: most worked in household activities (56.8%, 2,190,716, especially in agriculture), followed by employees in financial and nonfinancial institutions (36.6%, 1,411,936 people), local administration (5.9%, 227,629 people), and non-profit organizations (0.6%, 24,039 people).

1.3. Employed population by educational level

Within the employed population (8,507,759 people), the largest percentage was held by *secondary level graduates*, 66.7%, (5,677,025 individuals), who, based on their professional status, had the following structure: employees 66.6%, self-employed 17.7%, family workers 14.6%, business owners 1% etc.

The next largest category was *tertiary level graduates* 22.8%, (1,939,222 individuals), 94.1% being employees, 3% self-employed, and 2% business owners. *Primary level graduates* comprised 6.1% (523,039 individuals), most being self-employed (321,337), while *post-secondary and foremen vocational education graduates* 3.4% (293,392 people). People without any formal education numbered 75,081 (0.9%), out of which 49,959 were illiterate, most being self-employed.

2. The occupational structure of Romania at county level

This subchapter presents the situation of the *current active population by major occupational groups*, for the 41 counties of Romania and the municipality of Bucharest, divided into the three classic Clarkian economic sectors—*primary* (agriculture, forestry, hunting, fishing, and mining), *secondary* (industry and constructions), *tertiary* (trade; vehicle repair;

transport and storage; hotels and restaurants; financing and insurance; real estate; administrative services and support services; government and defense; social security in the public system; education; healthcare and social services; entertainment; other service activities; activities in private households as employer of household staff and goods production and service activities in private households). We also included a newer, fourth economic level, the *quaternary sector*, which basically includes: information technology (IT); professional, scientific, and technical (research) activities; activities of non-governmental organizations (NGOs).

2.1. Classification of the employed population by major occupational groups

At the last census (2011), the active population amounted to 45.6% (9,180,337 people out of a total population of 20,121,641). Percentages close to the national average, 44.1–46%, were found in 14 Romanian counties (Fig. 1): Teleorman, Maramureș, Olt, Bihor, Giurgiu, Prahova, Călărași, Alba, Buzău, Vrancea, Timiș, Hunedoara, Covasna, and Tulcea. Values between 46.1–48% were found in nine counties. These are either counties with historically high birth rates, which permanently fuelled the mature population group and prevented population loss due to mechanical movement (Mehedinți, Sălaj, Suceava, Vaslui, Tulcea), or industrialized counties, which, in time, attracted a significant number of workers (Ilfov), or counties which experienced both phenomena (Brăila, Galați, Iași, Bacău).

Values above 48% were found in counties with the same situation, that is, a high birth rate (Botoșani, Bistrița-Năsăud), a resource mining-based economy (Gorj), an industry-based economy (Argeș, Dâmbovița), or services-based economy (the city of Bucharest, with the highest value, 51%), which, over time, attracted a significant number of adult individuals.

Lower values, 44% and below, were registered in counties with low birth rates or intensive emigration, which caused population aging (Caraș-Severin, Satu Mare, Ialomița, Harghita, Vâlcea, Neamț) and in counties where, alongside the aforementioned situation, education was well implemented, enabling a longer education period for young people (Constanța, Mureș, Cluj, Dolj, Brașov, Sibiu).

Out of a total employed population of 8,507,759 individuals, most work in the service industry (table 1), 42% (3,678,257 people), followed by agricultural workers, 29.2% (2,484,076 people), while industry and constructions employed solely 24.7% of the workforce (1,995,773 people). We therefore encountered a situation uncharacteristic of developed countries: a high percentage of the active population employed in primary activities, even higher than the population working in the secondary sector. However, the percentage of active individuals employed in the service industry is insufficient for a developed economy, while quaternary activities employed only 4.1% of the occupied population (349,653 workers). Unemployment affected 7.3% of the active population (672,578 people), out of which 35.4% (238,270 people) were in pursuit of their first job.

Naturally, the urban-rural situation was different in terms of occupational groups from the general national situation (table 1). Thusly, in urban areas, the primary sector employed

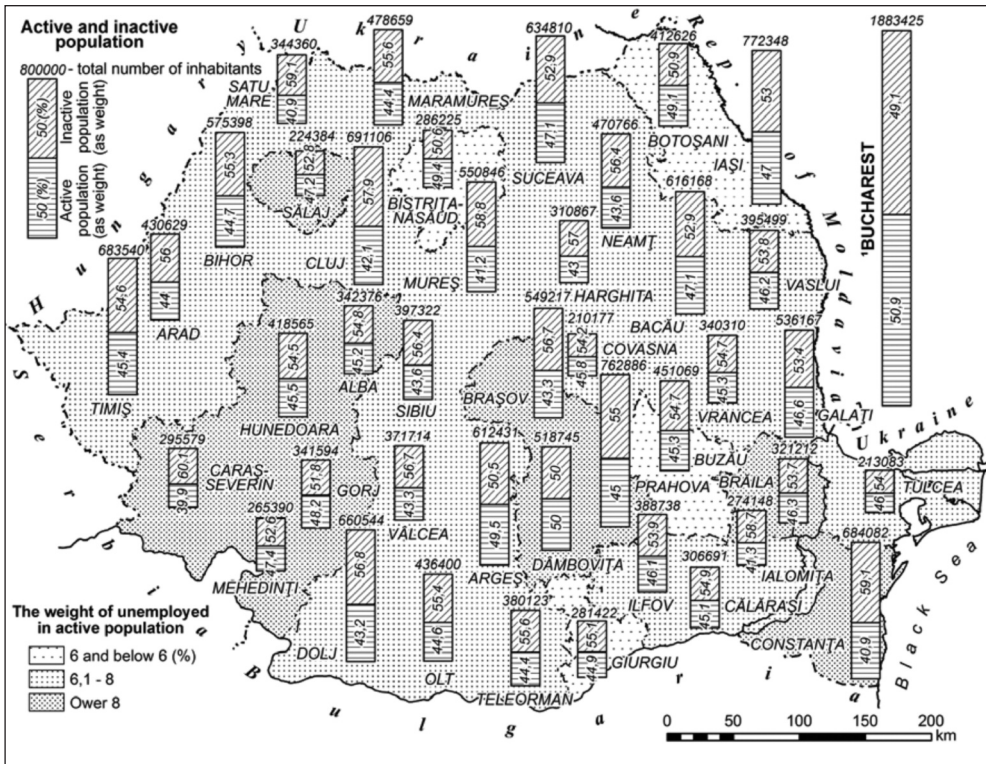


FIG. 1. Share of active and inactive populations in Romania’s counties. Unemployment rate.

only 6.1% (284,243 individuals) of the total employed population (4,653,439, 91.3% of the urban active population), 30.5% working in the secondary sector (1,419,060 people), while the tertiary sector was the largest (56.8%, 2,640,020 individuals).

The quaternary sector was rather minuscule, with 6.6% (310,116 people). Unemployment stood at 8.7% of the active population (442,214 people), out of which 32% (141,367 people) were in pursuit of their first job.

In rural areas, out of the total employed population (3,854,320 people, 94.4% of the active population), the values were as follows: 57.1% (2,199,833 people) activated in the primary sector, 17.7% (681,980 people) in the secondary sector, 24.2% (932,970 people) in the tertiary, while 1.1% (39,537) in the quaternary one. 5.6% of the active population (230,364 people) were unemployed, out of which 42.1% (96,903 people) were looking for a first job.

This rural-urban contrastive presentation suggests a dire need to increase the urban working population in the tertiary and quaternary sectors, in urban areas, and the rural working population in the secondary sector, due to a decrease in the number of agricultural workers.

a) *The population employed in the primary sector* stood, in 2011, at 29.2% (2,484,076 people) of the total employed population (8,507,759 people). 95.6% worked in agriculture, hunting, and adjacent activities, 1.5% in forestry and logging activities, 0.2% in fishing and aquaculture, while 2.7% worked in mining activities.

Values between 28.1–30% employees in the primary sector were found only in the county of Caraș-Severin (28.7%), while higher percentages, over 30%, were registered in 26 counties (Fig. 2). Here we find counties with a predominantly level orography (Olt, Teleorman, Giurgiu, Călărași, Ialomița, Dolj, Brăila, Galați), but also hilly counties and counties with a modest industrial development (Vaslui, Botoșani, Suceava, Vrancea, Mehedinți, Bistrița-Năsăud, Buzău, Dâmbovița, Sălaj, Tulcea, Covasna) or with long-decaying mono-industries (Bacău, Neamț, Iași, Vâlcea, Argeș, Maramureș), as well as in Gorj County, with coal mining and agricultural activities.

In three counties, Vaslui, Olt, and Teleorman, employees in the primary sector exceeded 50%, while in twelve others—Suceava, Vrancea, Mehedinți, Bistrița-Năsăud, Giurgiu, Bacău, Gorj, Călărași, Buzău, Neamț, Iași, and Dâmbovița—the employees in the primary sector were the majority.

Fourteen counties and the city of Bucharest registered values of 28% and below, most being mountainous (Hunedoara, Harghita), with highly developed industries and services (Brașov, Cluj, Constanța, Ilfov, Sibiu, Timiș, Arad, Satu Mare, Prahova, Bihor), or both (Alba, Mureș). The Municipality of Bucharest registered the lowest value, 1.3%, due to the scarcity of agricultural land and mostly to a predominance of tertiary and quaternary activities. Only Brașov and Cluj counties as well as Bucharest had percentages of primary sector workers below the threshold of 10%.

b) *The population employed in the secondary sector* has continuously decreased ever since the 1990s, caused by a drastic reduction in industrial activities. Consequently, the percentage of industry and construction workers decreased from 28.5% in 2002 to 24.7% in 2011 (1,995,773 employees). 71.4% of the employees worked in industrial activities while 28.6%, worked in constructions.

There were five counties around the abovementioned average, within the 24.1–26% category, having industrial activities combined with agriculture (Bistrița-Năsăud, Sălaj), or with services (Constanța, Vâlcea), or with both of them, in relatively equal shares (Brăila). There were only three county level administrative-territorial units with values between 26.1–28%: Cluj, where industry is associated with the services, Covasna and Caraș-Severin, where industry is associated with the primary and tertiary sectors.

Thirteen counties had values *above* 28%, either because industry has been the traditional activity in the area for many years, creating an industrial belt starting at Bucharest, following the Prahova Valley to Brașov, then westwards, with a ramification towards Cluj-Napoca and then north-northwest (Satu Mare, Sibiu, Timiș, Arad, Brașov, Prahova, Hunedoara, Maramureș, Bihor), along with Argeș County, or because of the industry developed more recently, after 1990, due to lack of alternatives in agriculture and services (Mureș, Alba, Harghita).

Values of secondary sector employment of 24% *and below* were found either in counties which never had a high degree of industrialization (Botoșani, Gorj, Teleorman, Mehedinți, Vaslui, Suceava, Giurgiu, Vrancea, Ialomița, Ilfov, Olt, Călărași, Buzău,

Dâmbovița), or in counties where the industry decayed and was replaced by agricultural activities (Bacău, Neamț) or by services (Iași, Dolj, Galați, Vâlcea, Tulcea). Very low values were also registered in Bucharest, highly focused on the tertiary sector. Secondary employment was not dominant in any of the Romanian counties.

c) *The population employed in the tertiary sector* registered an increase between 2002–2011 by a total number of 438,322 individuals (an increase of over 15%), thus having, in 2011, at national level, the highest value of the employed population, 42% (3,678,257 people). The occupation structure was as follows: trade, auto repair (28.9%); government and defense, public social security (13.2%); transport and storage (11%); healthcare and social assistance (10.4%); education (10.1%); administrative services and support services (6.7%); hotels and restaurants (4.6%); other service activities (4.6%); finance and insurance (3.5%); activities in private households as employer of household staff and goods production and service activities in private households (2.8%); water distribution, waste management, decontamination activities etc. (2.1%); entertainment (1.8%); real estate (0.5%).

Territorially, there were only seven counties with values around 42%, between 41.1–43%: Hunedoara, Harghita, Caraș-Severin, Satu Mare, Prahova, Arad, and Bihor. However, 27 counties registered values of 41% and below, mostly those counties where the employed population worked mostly in the primary sector (Olt, Vaslui, Bistrița-Năsăud, Teleorman, Vrancea, Suceava, Buzău, Bacău, Călărași, Mehedinți, Giurgiu, Neamț, Dâmbovița, Sălaj, Botoșani), where the employed population in the first two economic sectors had similar values (Argeș, Maramureș, Covasna, Vâlcea) or in counties where the service industry was only developed in county seats or in resorts, but mostly in agricultural and coal mining dependent counties (Gorj, Iași, Brăila, Galați, Ialomița, Dolj, Tulcea). In Harghita and Alba, due to poor agricultural development, the numbers of secondary and tertiary sector workers were similar. Similarly, in Satu Mare, with a more advanced agriculture, with fewer workers and greater mechanization, large number of people were employed in secondary and tertiary activities.

Values above the average were found in counties like Timiș, Mureș, and Sibiu (hosting medical centers and highly developed education institutions and facilities), with percentages between 43.1–45%. Even higher values were in counties with diversified tertiary activities (medical centers, universities, as well as transport and tourism based activities), with percentages above 50%, (Bucharest and the counties of Ilfov, Constanța, Cluj, and Brașov).

d) *The population employed in the quaternary sector* had a value of just 4.1% (349,653 employees) of the employed population, 44.7% working in IT, 54.3% in professional, scientific, and technical activities, and 0.9% in NGOs. Thus, values around the national average, that is, 3.1–5%, were registered only in Iași, Constanța, Sibiu, and Prahova. Values between 5.1–7% were found in four counties: Timiș, Brașov, Cluj, and Ilfov, important university and research centers. Values over 7% were registered solely in Bucharest, 15.1%. The lowest echelon, 3% and below, contained the remaining 33 counties, such as Botoșani and Olt, both with value of just 1.1%. Compared to 2002, when employment affected 11.8% of the active population, in 2011 the same indicator registered the value of 7.3% (672,578 unemployed people) of the entire active population (9,180,337 people – table 1).

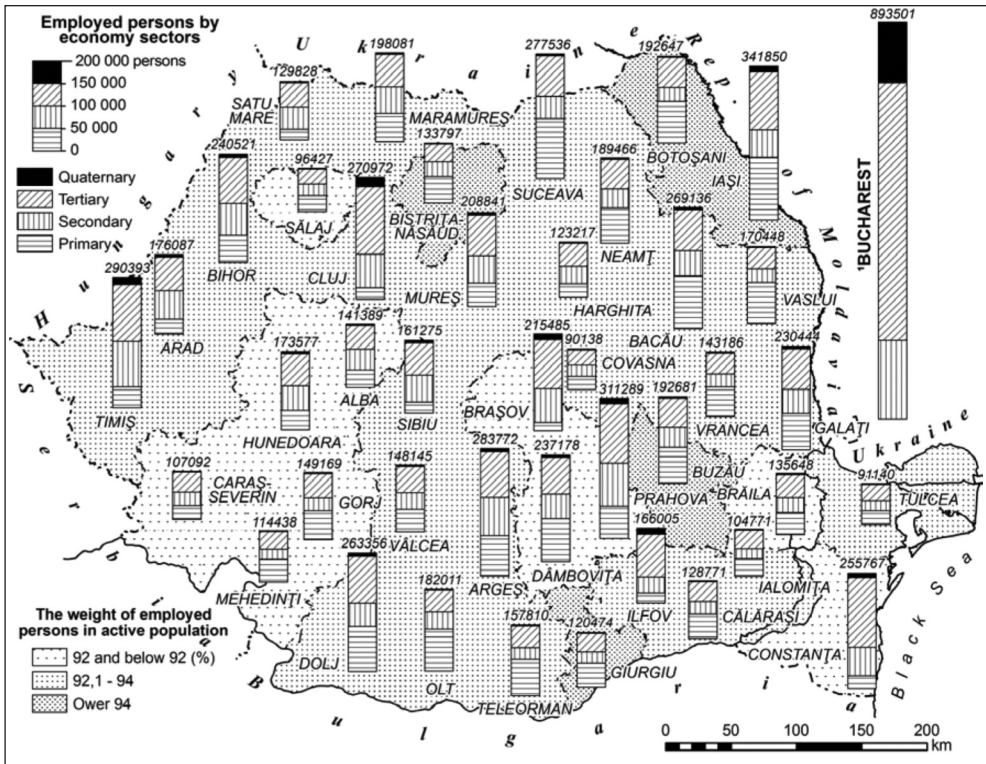


FIG. 2. The employed population of Romania, per county and economic sector.

25 counties and the city of Bucharest had percentage values around the national average (Fig. 1), between 6.1–8%: Argeș, Covasna, Teleorman, Olt, Bihor, Timiș, Vaslui, Maramureș, Cluj, Sibiu, Călărași, Tulcea, Arad, Vrancea, Bacău, Suceava, Ilfov, Ialomița, Neamț, Dolj, Galați, Satu Mare, Harghita, Vâlcea, and Mureș. With values of 6% and below, there were six counties: Giurgiu, Botoșani, Bistrița-Năsăud (lowest value, 4.7%), Buzău, Iași, and Teleorman, counties where the majority are self-employed or family farmers, with little to no chances of changing their line of work. 11 counties had values exceeding 8%, having either a more developed economy and therefore a more effervescent labor market (Brașov, Prahova, Brăila, Alba, Constanța), or suffering from mine and industrial plant shutdowns, and thus experiencing massive layoffs (Gorj, 9.4%, the highest percentage, Caraș-Severin, Mehedinți, Sălaj, Hunedoara, Dâmbovița).

2.2. The inactive population

At the 2011 census, the inactive population numbered 10,941,304 individuals, or 54.4% of the 20,121,641 inhabitants of Romania.

Thirteen counties were situated around the national average already listed, within the 53.1–55% bracket: Galați, Brăila, Vaslui, Ilfov, Tulcea, Covasna, Hunedoara, Timiș,

Vrancea, Buzău, Alba, Călărași, and Prahova (Fig. 3). Another 10 counties and the city of Bucharest had values of 53% *and below* in terms of the inactive population; these are either highly urbanized areas, where the number of middle aged individuals is generally high, while the young people, mostly students, are few (city of Bucharest, with the lowest value, 49.1%, and Argeș), or counties with high birth rates, fuelling and increasing the mature population (Bistrița-Năsăud, Botoșani, Mehedinți, Sălaj, Suceava, Bacău, Iași) or counties where their numbers were fuelled by immigration during the communist period (Dâmbovița, Gorj).

Higher values, between 55.1–57%, were found in 12 other counties. These countries generally have a large aging rural population, mostly retirees and pensioners, and household workers are extremely well represented, due to the poor economic development (Giurgiu, Olt, Teleorman), counties with massive rural areas but also with high birth rates, where the number of young people in school and also household workers is significant (Maramureș, Neamț, Dolj), counties where, due to low birth rates, the percentage of old people is above the average (Bihor, Arad), counties where the percentage of old people is high, a situation caused by significant industrial immigration in the years following the Second World War (Sibiu, Brașov, Vâlcea), or counties with a significant number of people categorized as “other situations” (Harghita).

Values over 57% were registered in counties with high numbers of students, caused by the development of education infrastructure, but also of pensioners, due to aging process (Cluj), in counties with aged populations and high numbers of household workers, due to poor economic growth (Caraș-Severin, 60.1%, highest value), in counties with extended rural areas and farmland, with high numbers of stay-at-home workers and dependents (Ialomița, Constanța, Satu Mare) or in counties with an aging populace or different stages of dependence (Mureș).

At national level (table 2), the largest segment of the inactive population was pensioners, 39% (4,268,347 people), followed by students, with 27.3% (2,990,441 people), other situations (other categories of dependents), 22.8% (2,496,840 people), and household workers 10.9% (1,185,676 people).

In urban areas, with a total population of 10,858,790 inhabitants, the inactive population reached a value of 53.1% (5,763,137 people), most being pensioners, 43.6%, then students, 27.6%, other situations, 19.4%, and stay-at-home workers, 9.3%. In Romania’s rural areas (9,262,851 people), the most numerous were still the pensioners (33.9%), followed by students (27%), but with lower values than in urban areas, other situations (26.6%), and stay-at-home workers (12.5%). This is a natural situation, on the one hand, as birth rates are higher in rural areas, and therefore so is the number of young people in schools, and on the other hand, the rural-urban economic situation enabled the concentration of those who had contributed to the pension system in urban areas, while rural areas concentrated those people in different stages of assistance (income of agricultural workers engaged in the former collective system), and stay-at-home workers.

a) *Students*, numbering 2,990,441 individuals, registered an average value of 27.3% of the total inactive population (10,941,304 people).

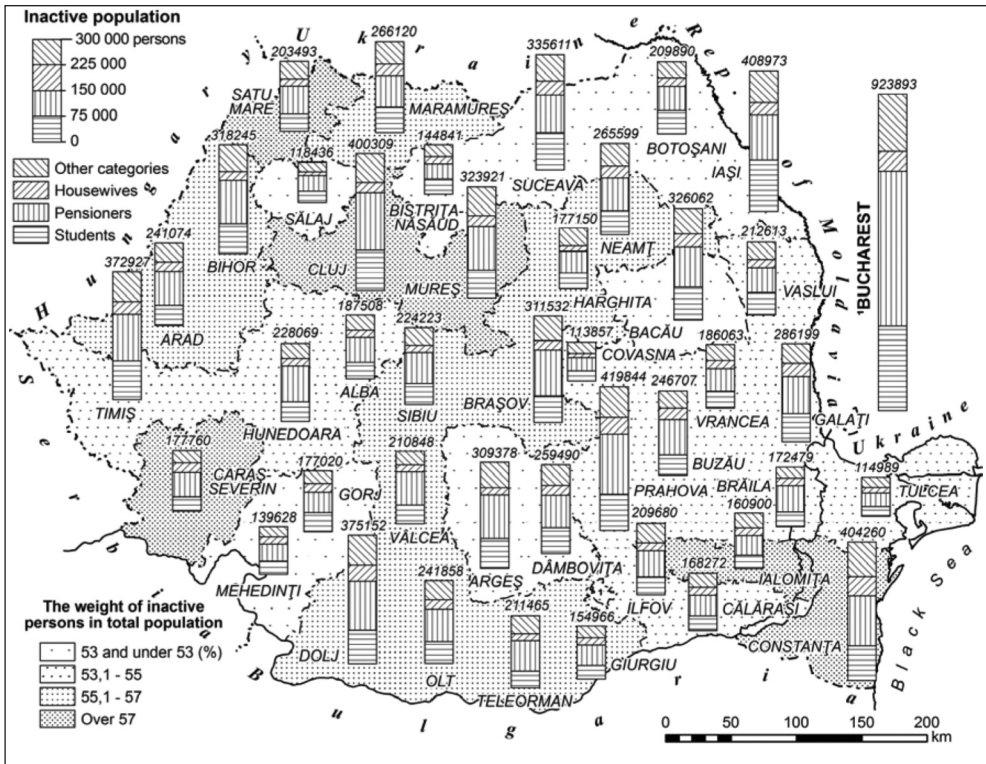


FIG. 2. The inactive population of Romania, per county and main categories.

Values between 26.1–28% characterized seven counties (Alba, Neamț, Sibiu, Vrancea, Mehedinți, Bihor, Maramureș) and the city of Bucharest. Lower values, 26% and below, are generally found in counties with low birth rates, caused either by population aging (mostly in the agricultural counties of the south – Teleorman, Ialomița, Brăila, Buzău, Călărași, Giurgiu, Olt, Dolj – but also in Caraș-Severin and Satu Mare), or by the massive urbanization of counties, as urban areas experience lower birth rates than rural areas (Arad, Brașov, Hunedoara, Vâlcea, and also Ilfov – where the population exhibits an powerful urban behavior, due to the proximity of Bucharest). This category also includes Covasna, Harghita, and Mureș, where birth rates decreased more drastically after 1990.

Higher values, situated between 28.1–30%, were found in counties that host important higher education institutions (Cluj, Argeș, Dâmbovița) or in counties with high birth rates (Sălaj, Galați, Bacău). The same reasons were behind the values above 30% found in counties with strong universities and technical schools (Timiș), high birth rate counties (Vaslui, Gorj, Bistrița-Năsăud, Botoșani, Suceava) or counties experiencing both phenomena (Iași, with the highest value, 36.4%).

b) Pensioners accounted for the largest “slices” of the inactive population (4,268,347 people, 39% of the inactive population). Values around this percentage, between 38.1–40%,

were recorded in the following counties: Alba, Caraș-Severin, Dolj, Giurgiu, Mureș, Olt, Satu Mare, and Sălaj.

Higher values, between 40.1 and 42% and over 42% were registered either in poorly developed, agriculturally centered counties, with a high rate of older men and women in rural areas (Buzău, Teleorman, Brăila), or in more urbanized, wealthier counties, with a high percentage of older adults in cities (counties like Arad, Sibiu, Argeș, Prahova, Cluj, Brașov, Hunedoara, Vâlcea, and the city of Bucharest, with the highest value, 48.9%).

Lower values appeared in counties with historically high birth rates (Bistrița-Năsăud, Iași, Suceava, Botoșani, Vaslui, Maramureș, Vrancea, Bacău, Mehedinți, Neamț), in counties which received an influx of workers during the industrialization years (Gorj, Tulcea) and in the counties of Covasna and Harghita, with high birth rates until the 1990s.

c) *Stay-at-home workers*, numbering 1,185,676 individuals, constitute 10.9% of the inactive population. Values around the average (9.1–11%) were found in Sibiu, Teleorman, Mureș, Vâlcea, Timiș, Hunedoara, Satu Mare, Covasna, Ilfov, and Olt.

Values of 9% and below were registered in Bucharest (6.2%, lowest national percentage) and in more developed counties, and especially in those areas where economic activities have been harmoniously distributed territorially, with plenty of job opportunities in urban as well as in rural areas (Argeș, Cluj, Bihor, Brașov, Sălaj, Harghita, Iași).

Values between 11.1% and 13% appeared in counties where the majority of the population works in agriculture or which experienced spikes in their economic development, towards which head of families commute daily, weekly or monthly, especially from rural areas, the rest of the family remaining in the care of stay-at-home moms: Vaslui, Dâmbovița, Alba, Arad, Prahova, Botoșani, Bacău, Suceava, Brăila, Maramureș, Dolj, Vrancea.

The highest values, above 13%, were recorded in counties experiencing poor economic development or facing intense emigration (Giurgiu, Buzău, Bistrița-Năsăud, Călărași, Ialomița, Mehedinți, Caraș-Severin), in the mining county of Gorj and in counties where the specificity of the transport activity implies that heads of families leave for a more extended period of time (Galați, Tulcea, Constanța).

d) *Other situations* (dependent on other persons, state or private organization dependent, dependent on other sources, other situations) is a significantly large category (2,496,840 individuals, or 22.8% of the inactive population), with values between 21.1–23% (around the national average), in nine counties: Cluj, Prahova, Mehedinți, Giurgiu, Botoșani, Iași, Bacău, Suceava, and Sibiu.

Lower percentages, 21% and below, were recorded in Bucharest (18.1%, lowest value) and in counties where the inactive population has other types of income, mostly pensions, due to the fact that these areas have or had developed industries and services (Brăila, Vâlcea, Hunedoara, Galați, Caraș-Severin, and Buzău).

Values of 23.1–25% were found in counties with a similar situation to the below average category (Brașov, Timiș, Argeș, Constanța), or in counties where the population mostly worked in agriculture, currently benefitting from the agricultural indemnity (Olt, Sălaj, Vaslui, Călărași, Bistrița-Năsăud), but also in counties experiencing both situations already mentioned (Arad, Dâmbovița, Alba, Neamț, Bihor, Maramureș).

The highest values, *above 25%*, were recorded in those counties where, alongside the previously mentioned situations, parts of the population depends on the diaspora (counties with large percentages of Hungarian ethnics—Harghita, with the highest value, 29.2%, Covasna, Mureș, and Satu Mare, as well as the county of Ilfov, with numerous foreign residents) and in agricultural counties or with a myriad of isolated settlements (Teleorman, Tulcea, Vrancea).

Conclusions

OUT OF the total of Romania's inhabitants registered in 2011 (20,121,641 people), 45.6% were part of the active population, the highest values being found in the city of Bucharest, more exactly 50.9%, while the lowest were in the county of Caraș-Severin, with 39.9%. Generally speaking, higher percentages for the active population can be found in historically high birth rate counties, which covered the population deficit caused by mechanical movement, while low values appear in counties with low birth rates and intensive emigration (processes leading to demographic aging), as well as in counties with a more developed education system, which enabled a longer education period for young people.

Between 2002 and the year of the last census, 2011, the employed population experienced an increase of those working in services and in the quaternary sector, mainly in urban areas, while the percentages of people engaged in agriculture, industry and constructions notably decreased.

Primary sector workers (2,484,076 people) were 29.2% of the active population, the highest rate being recorded in Vaslui (53.3%), with the lowest in the capital city of Bucharest (1.3%). Higher percentages were found in low lying counties, in predominantly hilly counties but with a modest industrialization, as well as in those counties which combine agricultural activities with mining.

Secondary sector workers numbered 1,995,773, meaning 24.7% of the employed population, the highest county value being recorded in Satu Mare (37.5%), while Botoșani had the lowest (15.5%).

The most significant number of secondary workers are found in areas with a strong and historic connection to industry (the Bucharest–Prahova Valley–Brașov–Hunedoara–Arad–Timișoara industrial belt, with a ramification towards Cluj–Satu Mare), while the lowest number, in agricultural counties, with large and expansive farmland, or in counties where the former communist industry collapsed.

Tertiary workers, with a national average of 42% of the employed population, had their highest percentage in the city of Bucharest, 64%, and the lowest in the southern county of Olt, 26.5%. The highest percentages were recorded in the capital city and in counties with major medical, educational, research, tourism, and transport institutions and organizations. The lowest values were seen in agricultural counties, coal mining counties, or where the employed population in the primary and secondary sectors had similar rates.

The analysis of the *quaternary sector*, with a national average of 4.1% of the employed population, brought to light the fact that Bucharest hosted the largest number of quaternary employees (15.1%), 7–10 percent more than the other quaternary powerhouses (Ilfov, Cluj, Braşov, and Timiş). The remaining counties were below the average, the lowest percentages being recorded in Olt and Botoşani, with 1.1% each.

The *potentially active population*, searching for a place of work (*unemployed*), numbered 672,578 people (7.3% of the active population) and was the most numerous in the county of Gorj (9.4%), and the fewest in Giurgiu (4.7%). Values above the average are generally found in counties where mining and industrial activities have been substantially downsized in the last quarter century and in economically developed counties, with a more dynamic labor market. Below the average are counties where most people work in agriculture, are self-employed or stay-at-home workers, with few possibilities to find another line of work.

The inactive population (54.4% at national level) registered decreases between the last two censuses, including students, pensioners, and stay-at-home workers, while other types of dependents increased.

Pupils and students had a percentage of 27.3 % of the inactive population, Iaşi County registering the highest value, 36.4%, while Teleorman the lowest, 23.3%. High percentages are found in counties with a high birth rate or with major universities, and low percentages in counties with low birth rates, caused by population aging or by a large urban population, which generally exhibits low birth rates.

Pensioners, representing 39% of the inactive population, registered different percentages, the highest value, 48.9%, being recorded in Bucharest, and the lowest in Bistriţa-Năsăud, 30.5%. Higher values are found in agricultural, mostly rural counties, with an aging population, and in economically developed urbanized counties, with low birth rates and therefore more older adults in urban areas. Lower percentages are in high birth rate counties, with a high ratio of young people and adults, or in counties targeted by immigration waves during the industrialization period, with higher percentages of adults.

Stay-at-home workers amounted to 10.9% of the inactive population, and compared to the national average. The highest values emerged in Caraş-Severin (16.2%), and the lowest in the city of Bucharest (6.2%). Lower percentages were observed in Bucharest and in economically developed counties, and most of all, in those areas with harmoniously territorially distributed economic activities, with plenty of job opportunities in rural and urban areas; higher percentages appear in agricultural counties or with enclave-based economic development, towards which heads of families gravitate daily, weekly or monthly, the remaining members of the family remaining in the care of stay-at-home moms, as well as in the mining county of Gorj and in counties with heavy transport activity.

The other situations category, 22.8% of the inactive population, registered its highest value in Harghita, 29.2%, and its lowest in Bucharest, 18.1%. Lower values are characteristic of counties where the main source of income for the inactive population is pensions, generally counties that have had or have a developed economy, while superior rates are found in areas where the inactive population depends on different types of social aid or agricultural indemnity, as well as money from their diaspora relatives.

Finally, taking into consideration the specificity of the topic at hand, we would like to emphasize several aspects regarding *the demographic dependence index*, which, at the time of the 2011 census, had a value of 701 dependents / 1000 able-bodied individuals.

The index was lower in urban areas (588/1000), while in rural areas it was above the national average (841/1000), due to population aging and poor economic growth. At county level, this index attained a maximum value of 848 dependents / 1000 able-bodied individuals in Ialomița County, and a minimum in Bucharest, 527 dependents / 1000 able-bodied individuals.



References

- ***. 1984. *Geografia României, II, Geografia Umană și Economică*. Bucharest: Editura Academiei.
- ***. 2011. *România în cifre. Breviar statistic*. Bucharest: Institutul Național de Statistică.
- ***. 2014. *Strategia de dezvoltare teritorială a României. Studii de fundamentare*. Bucharest: Ministerul Dezvoltării Regionale și Administrației Publice.
- *** <http://www.recensamantromania.ro/rezultate-2/>, consulted on 13 February 2016.
- Bailly, A. and Hubert, B. 1982. *Introduction à la Géographie Humaine*. Paris: Masson, Collection Geographic.
- Bailly, A. 1991. *Les concepts de la Géographie Humaine*. Paris: Masson.
- Bailly, A. and Hubert, B. 2001. *Introduction à la Géographie Humaine*, Paris: Armand Colin.
- Carles, C.V. 1998. *Geografia Humana*. Barcelona: Universidad de Barcelona.
- Ciangă, N., and Rațiu Ramona. 2003. *Geografia Umană a României. Îndrumător de lucrări practice*. Târgu Mureș: Dimitrie Contemir.
- Claval, P. 1974. *Elements de Géographie Humaine*. Paris: M-th. Gemin, Libres Techniques.
- Coccan, P., Niță, A. and Dombay, Șt. 2013. *Județele României. Județul Harghita*. Bucharest: Editura Academiei Române.
- Edeli, G., Braghină, C. and Frăsineanu, D. 2000. *Geografie economică mondială*. Bucharest: Editura Fundației România de Măine.
- Harm, J de Blij. 1977. *Human Geography-Culture, Society and Space*. Canada: El John Willy.
- Iașu, C. and Muntele, I. 2002. *Geografie economică*. Bucharest: Editura Economică.
- Ilinca, N. 2008. *Geografia Umană. Populația și așezările*. Bucharest: CD PRESS.
- Niță A. 2007. *Populația și așezările din Depresiunea Brașov*. Cluj-Napoca: Teză de doctorat, Universitatea "Babeș-Bolyai" Cluj-Napoca, Facultatea de Geografie.
- Max, D. 1991. *Géographie humaine*. Paris: Armand Colin.
- Păcurar, Al. 2006. *Geografie economică mondială*. Cluj Napoca: Presa Universitară Clujeană.
- Păcurar, B. N. 2011. *Funcțiile terțiare ale municipiului Cluj-Napoca*. Cluj Napoca: Presa Universitară Clujeană.
- Pop, P. Gr., Maier, A., Ciangă, N. 1986. "Unele probleme referitoare la populația din Culoarul Bistra-Strei," in *Probleme de Geografie Aplicată*, Univ. Babeș-Bolyai, Cluj-Napoca, 1: 127-134.
- Pop, P. Gr. 2007. *Județele României. Județul Cluj*. Bucharest: Editura Academiei Române.
- Raboca, N., Ciangă, N. and Păcurar, Al. 2001. *Geografie economică*. Arad: Vasile Goldiș University Press.
- Surd, V. 2001. *Geodemografie*. Cluj-Napoca: Presa Universitară Clujeană.

Tofan, G. B. 2013. *Componenta nordică a ulucului depresionar din Grupa Centrală a Carpaților Orientali (Dmăgoiasa-Glodu-Bilbor-Secu-Borsec-Corbu-Tulgheș)*. Cluj-Napoca: Presa Universitară Clujeană.

Abstract

The Occupational Structure of Romania

The present study intends to emphasize crucial aspects regarding the occupational structure of Romania's population, for all of its 41 counties and the Municipality of Bucharest, based on statistical data from the last census. As a more general aspect, out of the 20,121,641 inhabitants, 45.6% (9,180,337 people) were *active*, while the remaining 54.4% (10,941,304 people) were *inactive*. In terms of major economic sectors, we observed a high percentage of employees in the *service* sector, 43.2%, followed by *agriculture*, 29.2%, *industry and constructions* with 23.5%, while *the quaternary sector* employed 4.1%.

The potentially active population, *the unemployed*, made up 7.3% of the active population. Regarding the inactive population, most were pensioners, 39%, followed by pupils and students with 27.3%, then by other categories of dependent people, with 22.8%, and stay-at-home workers with 10.9%. According to their professional status, the vast majority were *employees* (69.8%), followed by *self-employed* (17.1%), *family workers – unpaid* (11.8%), *business owners* (1.2%) etc. When it comes to their educational status, 66.7% graduated *the secondary cycle* (high school, professional or apprentice), while only 22.8% completed their *tertiary education*, followed by those with *primary education* (6.1%) and by those with *post-secondary and foremen vocational education* (3.4%); people with no education comprised 0.9% of the population.

Keywords

2011 Census, occupational structure of Romania, counties, socio-economic dependence