
ISSUES RELATED TO THE REAL SALARY INCOME INDEX IN PUBLIC AND PRIVATE SECTORS

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Abstract

"Real salary income" is a statistical indicator widely used for measuring the employed population's power to buy or use goods or services, based on the average net monthly salary income.

The purpose of this paper is to analyze "the real salary income" depending on the ownership of the employer. The public and the private forms of enterprises are mostly observed in order to facilitate the assessment of potential disparities related to the purchasing power of the employees in both sectors. By analyzing the statistical data and information, the study observes both the level and the evolution of employment in terms of the legal form of labor organization. The paper is focused on a practical approach on the income formation and evolution that provides valuable insights on the differences in consumption trends in the public and the private sectors.

The interpretation of the index progression shows that in Romania, over time, there has been persisting an atypical relationship of superiority of the salary income in the public sector compared to the one in the private sector, although the engine of economic functioning finds its sustainability in the activity of private entities.

Keywords: real salary income, public property, private property, consumer trends

JEL Classification: C10, J30, J31, M50

Introduction

The research conducted by the Organization of Economic Cooperation and Development (OECD) shows that Romania is the country with the greatest number of companies where the state holds the majority of participating interests, from the entire European Union. In addition, they reveal that Romanian public entities have a significant impact on domestic economy, given the large number of public enterprises (1,525 on 6/30/2014), the significant share in the Gross Domestic Product (11.4% of the GDP in 2013) and the large number of employees (7.5% of the country's active population) (Dochia et.al., 2014).

Moreover, according to European statistics, Romania is the second country, after Slovenia, with the largest number of employees who earn less than 105% of the minimum salary per economy. (Eurostat, 2017).

Taking into consideration the hereby statistical data, the paper focuses on the comparative analysis of the average salary income in the public sector and the average salary income in the private sector. The evolution of the indicators reveal different patterns and indicate disparate proportions of the purchasing power of the two categories of employees, given the same local market conditions.

1. General and specific concepts for the calculation of the real salary income index

The real salary income index indicates the purchasing power of the achieved salary income and it is calculate based on the ratio between "the average net nominal salary income index" and "the general index of consumer prices". The result of the two variables expresses, as a percentage, the value of the goods and services that can be purchased from the net average salary income in terms of market prices, in a timeframe that can be compared to other periods.

The average net salary income is the mathematical expression of the average gross salary income minus the amount of taxes, contributions to the state social insurance, health insurance and unemployment fund. The mathematical expression of this indicator is represented by the ratio between the net amounts paid by employers to their employees during the reference period (in this case, the calendar year) and the average number of employees.

The average number of employees is determined by a simple arithmetic mean calculated based on the daily numbers of employees in the respective month. The average number of employees includes the persons who were paid during the reference period, and the employees who are not full-time employees and who are included in the calculation proportionally to the working time stipulated in the employment contract. The average number of employees indicator does not include the employed persons on leave without pay, on strike, detached to work abroad and those whose employment contract or relationship was suspended (Institutul Național de Statistică, 2017).

The annual index of consumer prices used in providing statistical data at the level of our country is an economic indicator that aims at measuring the overall evolution of the prices for the purchased goods and of the tariffs for the services used by the population in a current time horizon, compared to a previous period. In the literature, this indicator is recognized as a Laspeyres-type index with a fixed base, which, in calculations, uses the goods representative of the population's consumption basket (considered as food items, non-food items and services) and the price levels in the current and reference periods.

2. The methodology used for the analysis of the real salary income index in the public and private subdivisions

The information processed in this paper is based on the latest data provided by the National Institute of Statistics of Romania (NIS), the National Bank of Romania, European Union Council Regulation no. 530/1999 concerning the structural statistics on the salary income and the labor costs, as well as the research studies published in the field.

For a better understanding of the hypothesis of this study, the research methodology is illustrated with a series of graphs and tables.

In order to meet our objective, the statistical information have been processed in order to identify the connection or differentiation between the evolution of employment levels in the public and private sectors, the premises of the evolutionary trend of the real salary, granting the investigation of consumer trends.

The paper appoints the period between the years 2010 and 2015 as the reference for the accrued data.

3. Research results

In Romania, civilian employment is calculated based on statistical methodologies and it includes the total number of people who normally pursue economic or social activities producing income in cash, in kind or of any other nature, based on the labor contract or independently. Thus, according to the workforce balance, the civilian employed population is determined by the following mathematical formulas:

$$POCvl = S + P + Lcp + Lfn \quad (1)$$

where:

- POCvl - civilian employed population
- S - employees or people who work under an individual labor contract, in an economic or social entity, in exchange for a salary or a salary assimilated income, in cash or in kind;
- P - employers or persons who work in their own entity, with one or more employees;
- Lcp - self-employed persons or persons who work in their own entity, with their own equipment or based on their professional training, without hiring employees, but with the possibility of seeking the help of unpaid family members;
- Lfn - unpaid family workers or people who work in a family economic entity headed by a family member, wherefore s/he does not earn salary income or payment in kind.

Between 2010-2015, the civilian employed population categorized by national economy activities and by forms of property are presented as follows:

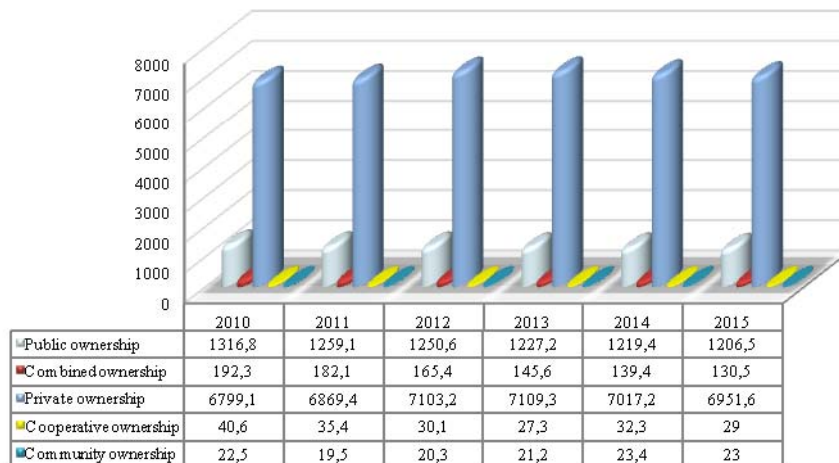


Figure no. 1 : The civilian employed population cathegorised by national economy activities and by forms of property

Source: National Institute of Statistics

The graphical analysis of the structure of the employed civilian population reveals that, nationwide, the population's activity takes place mainly in private sector entities, followed by the public sector and the mixed one. The activities within cooperative or community ownership entities (these are particular forms of ownership described as a form of ownership in the local regulations) represent a very low presence in the national economy. In structural terms, the civilian employed population is represented mainly by people working in private ownership entities, the share of the persons employed in this sector being about 83% over the analyzed period. The next sector of significant importance in terms of workforce analysis is represented by the public property, where the share of the employed persons is around 14% in the reference time horizon, in relation to the total number of civilian employed persons. The activity conducted in cooperative or community ownership forms is underrepresented nationally, each recording a percentage of up to 1% of the total civilian employed population during 2010-2015.

By processing the statistical information, we found out that the employment level of the civilian population had a fluctuating evolution, with a decreasing trend throughout the analyzed period: if in 2010 the civilian employed population totaled 8,371.3 thousand persons, in 2012 it reached the maximum level of the period, i.e. the number of employed persons was 8,569.6 thousand, and in 2015 the indicator decreased to 8,340.6 thousand persons. The statistically calculated civilian employed population in 2015 was by 0.37% lower than in 2013.

The downward trend in the employed civilian population showed a steady downward evolution in the entities where the state had a majority or full participation, amid the repeated restructuring of the public sector. The evolution of the employment in the private sector experienced an upward trajectory until 2013, followed by a decrease in the number of the employed persons during 2014-2015.

The employment degree in the cooperative sector was characterized by a steady decline, while in the common ownership sector it showed a fluctuating trend, with a slight increase towards the end of the analyzed period. A common feature of cooperative or common ownership entities was represented by the fact that the number of active persons is insignificant compared to other forms of legal organization.

The statistical survey of the real salary income was focused on two main ownership forms, harmonized with the nomenclature of the national ownership forms:

- Public property - including entirely state-owned businesses, autonomous administrations, majority state-owned businesses and public entities of national and local interest;
- Private property - including private entities with majoritarily or entirely privately owned domestic or foreign capital, cooperative property (consumer cooperatives, handicraft, credit cooperatives and unprocessed agricultural associations) and common ownership entities (companies belonging to communities and to political organizations and institutions) (Agenția Națională de Administrare Fiscală, 2017).

The statistical research is based on a survey conducted by the National Institute of Statistics (NIS) over about 27,300 active entities with legal status, whose main activity is included in the divisions of the classification of economic activities in Romania (CAEN Rev. 2), harmonized with the European classification in the field (NACE Rev. 2). The investigation has exhaustively researched the economic entities with 50 or more employees, while the entities from the size class 1- 49 employees were investigated selectively, based sampling methods.

Starting from 2010 until 2015, the average net nominal monthly salary income is graphically represented as follows, taking into account the property forms:

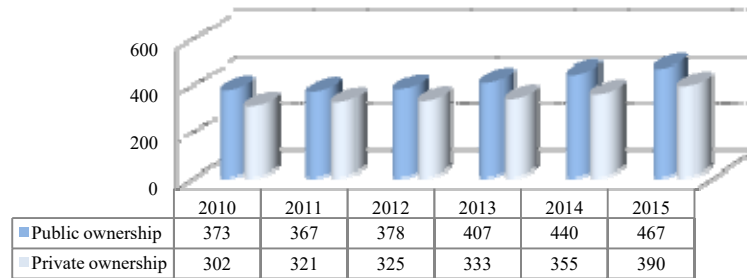


Figure no. 2: The evolution of the average net nominal monthly salary income (expressed in Euros)

Source: The graphically analyzed indicators were established by personal calculation, based on the information published on the website of the National Institute of Statistics, Romania

The analysis of the data summarized in the chart reveals that, in 2010-2015, the average net nominal monthly salary income from the public sector was higher than the one achieved in the private sector, as follows: in 2010, the indicator measured in public entities, respectively 373 Euros, was by 23.51% higher than its correspondent from the private sector (i.e. 302 Euros). In 2015, the value of the average salary income from the public sector, i.e. 467 Euros, surpassed the similar indicator calculated in the private sector (i.e. 390 Euros), with a percentage of 19.74%.

The growth rate of the average net nominal monthly salary income in public units, in the reference period, experienced a more pronounced trajectory in 2014 compared to 2013, when the increase was represented by 8.11%. Afterwards, the salary increase trend continued at a slower pace, so that, in 2015, the salary indicator was by 6.14% higher than in 2014.

Similarly, in the private sector, the average net nominal monthly salary income experienced an upward trajectory, the growth rate being lower in 2014 compared to 2013 (the increase rate was 6.61%), while, in 2015, the wage increases measured a percentage of 9.86%.

In conclusion, during the analyzed time horizon, represented by the period 2010-2015, the average net nominal monthly salary income from public property entities was higher than its correspondent from private entities, with a percentage of over 19%. The situation can be classified as atypical, given that the national GDP is formed at a rate of over 70% by the private sector (Anghelache et.al., 2014).

The salary growth rate in the reference period was slower in public entities (the absolute percentage increase was about 25% in 2015, compared to 2010) compared to privately owned entities (the absolute percentage increase totaled about 29% in 2015 compared to 2010). At the same time, the net average salary income in the private sector recorded a slight decrease in 2011, then followed an increasing trend until the end of 2015. In the private sector, the net average salary income showed a sustained growth trend.

The studies focused on the establishment of causal relationships regarding the increase in salary income show that the rise in the average salary income was due mostly to the increase in the gross minimum salary per economy (INCSMPS, 2016) and in the income

from social assistance, but it was also triggered by the low inflation level. According to the statistical surveys conducted by the National Bank of Romania, the increase in the minimum salary directly affected at least 22% of staff from the private sector (RNB, 2015). The general consumer price index is a barometer for measuring consumer prices, known in the literature as the Laspeyres index, which is calculated according to the following mathematical formula:

$$L_{1/0} = \frac{\sum q_0 P_1}{\sum q_0 P_0} \tag{2}$$

Where:

- L - Laspeyres index in the current period compared to the reference period
- p₀ - the price of a product / service in the base period (reference)
- p₁ - the product price in the current period
- q₀ - the quantity of sold products/ services in the base period

In order to achieve the objective of this work, namely to analyze the evolution of the real salary income index in the surveyed sectors (i.e. public and private), we calculated by ourselves the indices of the average net nominal monthly salary income and the consumer price indices, using the statistical data provided by the National Institute of Statistics.

We calculated the indices for each year, based on the consecutiveness criteria of the previous years, taken as reference.

The real salary income index for public and private property entities was calculated by the authors of this study by dividing the net nominal monthly salary index to the general consumer price index for the period under review. Moreover, the analysis was focused on the consumer trends of on food items, non-food items and service consumption, in correspondence with the price index statistically determined for each variable.

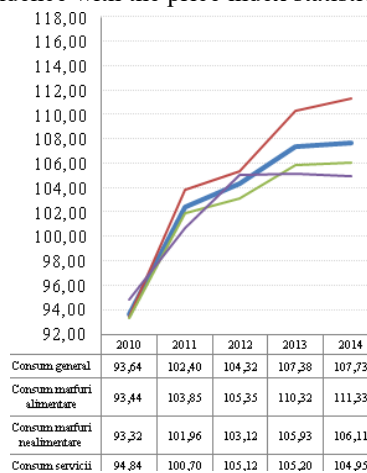


Figure no. 3: The evolution of the real salary income index in the public ownership system, influenced by consumer factors

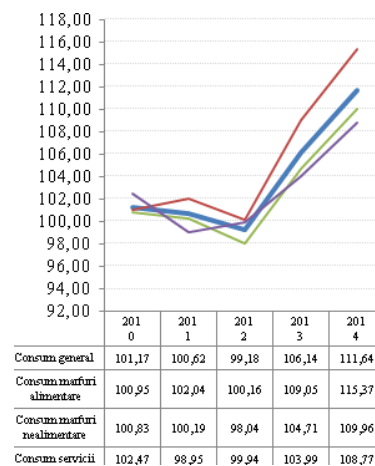


Figure no. 4: The evolution of the real salary income index in the private ownership system, influenced by consumer factors

Source: The graphically represented indicators were calculated by the authors' own processing of the data supplied by the National Institute of Statistics, for 2010-2015

Adapting and processing the statistical data on the real salary income index with consideration of a successive annual temporal reference are based on the premise that it is necessary to analyze the uncertainty and sensitivity that might influence the statistics (Vaida-Muntean et.al., 2014).

According to the results obtained in this work with regard to the average net nominal monthly salary income, it is noteworthy that it recorded a higher level of achievement in public property entities, compared to those of private property. As a result, a higher salary income in the public sector indicates a higher living standard of the active persons from this sector, compared to those from the private environment.

In terms of the consumption trends of the real salary income, the obtained indicators reveal that the staff employed both in the public sector and in the private one show the tendency to allot the majority of their funds to the food necessary to subsistence. A smaller share (compared to food) in the consumption basket is represented by the allotment for non-food items or services.

Conclusions

The results of this analysis complete the statistics and the studies conducted on the large number of Romanian employees remunerated with minimum salaries. In the recent years, in Romania, there has been persisting a phenomenon detached from the ideology of economic normality, namely that the staff employed in the public sector is paid more than their peers from the private sector. This antagonistic situation stems from the fact that the private sector has the most significant contribution to the Romanian gross domestic product and, therefore, a better remuneration in this sector could or should constitute the prerequisites for an increase in labor productivity, decreased unemployment levels, better professional training, envisioning a contribution to sustainable economic growth.

The calculation of the real salary income index, according to public/ private property forms of the entities where it operates, show that, in certain periods, the indicator calculated for the public sector was lower than the one from the private sector, although the average net nominal salary income from the public sector was higher than the one from the private sector. This situation demonstrates that the evolution of the real salary income index is influenced by factors other than the indicators based on which the calculations were made, such as the pace of the increase/ decrease in the average net salary income in each sector separately. Thus, the criteria and the factors that influence the salary income growth in the two major areas of activity in Romania could be developed in order to find those equitable solutions in the decision making process related to establishment of remuneration on the labor market.

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