

WHERE, HOW AND WHEN WORK PEOPLE IN BIHOR COUNTY?

Florica Ștefănescu, Delia Bekesi, Csaba Bekesi

Department of Sociology and Social Work, Faculty of Social Sciences, University of Oradea, Oradea, Romania

florica.stefanescu@gmail.com

georgianabekesi@yahoo.com

csaba_bekesi@yahoo.com

Abstract: *The last decades had brought major changes on the labor market, being necessary to look for new solutions which can adapt to the new condition of this market, both the employees and employers, but also the institutions that have responsibilities on this market. We are focusing on identifying some characteristics of the labor market in Bihor and explain some phenomena and economic indicators on this market, taking into consideration the statistic data from the Statistical Yearbook of the NIS (National Institute of Statistics and the Statistical Bulletins of the Bihor County Direction of Statistics. We analyzed four indicators that we consider relevant: employment, investments, wages and productivity. Capturing the evolution of these indicators in the Bihor County's economy and of the factors that determine them allowed us to draw some conclusions regarding the specific of the labor market in Bihor County, namely the specific structure of the labor market in Bihor, in so far as they have been influenced employment, unemployment and productivity by investments and technology, and explanations of low average salary in Bihor, reported to other macroeconomic indicators.*

Keywords: regional labour market, work, capital, productivity, investments

JEL classification: R11, J21, J31, O18

Introduction. Challenges for the labor market

The relationship man and work has been changing over time. Through work, a person transforms the environments to cover his or her needs, to achieve its goals, but transforms itself both in terms of biological and intellectual and emotional. Sometimes, the man was overwhelmed by work, sometimes he worked with please and brought him work rewarding, and sometimes it just felt like toil, like an obligation.

Long time, work was a direct relationship between man and the work instrument, but after technology was interposed between man and the object of his work, the work has become more complex, and the man more claimed. The technology has eased the physical labor of man, but it pressed the intellectual labor, and in the majority of cases, it replaced the man from the work place. Developed economies are currently experiencing profound changes generated primarily by the technological revolution, that brings new economics sectors based on telecommunications, biotechnology, microprocessors that make the shift

from industrial to services and that is one of those “Cycles of creative destructions”, provided by Schumpeter since 1950. (Hall and Soskice, 2001: 54).

The literature indicates a positive relationship between the technological development and the decreasing of the total hours worked (Gali, 1999; Francis and Ramey, 2002; Basu, Fernald and Kimball, 2004), but also a powerful effect of technology’s impact on employment, depending on the nature of the work (Chang and Hong, 2006).

Work location itself has changed (Aries and Duby, 1995), from work in nature to housework, then to work in factory, and currently to work “remotely”.

Work’s duration, in formal terms, has been steadily decreasing: from time expressed in the succession day-night, or the seasons day-light, to time in standardized units, in work hours/days, from 12 hours per day, then to 10, 8, and more recently, 6 hours, as well as the number of days or hours per week. In fact, the labor time, especially once with the increasing of competition in the labor market, is still increasing, extending over time from the work place, rushing over the free time, personal life, pushing people to “exploit themselves” (Schrenk, 2010).

Also the program of work has changed: absent at first, then fixed (for example from 8 to 15), currently making its way the flexible schedule in more and more companies, very appreciated by employees.

Labor market institutions and regulations in this market have progressed from deregulation to self-regulation and then to international regulation. Currently, the degree of regulation in the labor market is very different both in terms of employment laws and the legislation regarding labor relations. The deregulation is associated with a higher share of the economy, with a lower degree of employment and unemployment, especially among young people. Wider employment legislation is characteristic of leftist regimes and is joined by a focus on the social security. In a ranking based on an 2004 survey in 85 countries, the UK and USA are on the 8th and 9th as a degree of deregulation of the labor market, while Germany and Norway are on the 77th and 79th, which indicates the fact that there does not exist a direct relationship between the regulation in the labor market and the economy’s performance (Botero et al 2003: 47-48).

Social and occupational division of work has emphasized from what history calls “the first great division of labor”, that divides men into just two professional categories, farmers and shepherds, to more narrowed specializations from today, which requires the presence in the labor market of the experts on clear outlined areas. If this leads undoubtedly an increasing of the labor’s productivity, instead they threaten the interdisciplinary of holistic vision, with an impact on the satisfaction at the work place and even on the quality of the work’s life, the automatism that involve excessive specialization, often leading, paradoxically, to the increasing of the number of labor accidents.

But maybe, the biggest challenge for the labor market in the contemporary worlds is represented by the globalization that involves not only the spatial extent of work, but also emphasizing the interactions and even the addiction in the process of work. On one hand, local activities are under the impact of some global factors, and on the other hand, a phenomenon of dissemination of some practices in the work process, a kind of “imitation” (with the addition that the consume needs

are transmitted more fast than the production needs, G. Tarde, 1890), but not only in innovation, but a generalized imitation, whose main vectors are transnational companies, international organizations and international migrations, however inducing global transformations. Such forms of imitations are reflected in the fact that the structure and the basis strategy of companies is similar, competitiveness being associated with the costs of the labor force, resulting in many cases, relocation of production, despite the fact that the relocation often face low skilled labor and hence, low productivity of labor or poor quality production (Hall and Soskice, 2001: 55)

Globalization generates a “risk society” (Beck, 1992), facing global risks: terrorism, climate change, major economic crisis, the impact on the labor market in terms of interconnectability and independence of complex relations between regions, states and global economic agents.

If we add to all these the contraction of space under the transport and telecommunication development impact, which accelerates people’s mobility and of all forms of employment and of doing business, and time dilation (meaning labor productivity growth), we have a holistic picture of the “wonderful new world of work” (Schrenk, 2010) in a “world system” (Wallerstein, 1974), or a “global village:” (McLuhan, 1962). The organization of the work undergoes significant changes in this context; the individual is drawn into networks and workflows that have nothing common with the classical organization of organizational type.

Man must adapt to changes so simple and expeditious, which often means defying the limits of biological, psychological, professional, and educational. Among the fundamental challenges of the contemporary worker, is the search for identity and reporting to a system or a scale of values to confer civic and emotional stability and consistency.

Employment – investments – wages - productivity. Where, how much and how the Bihor people work?

Despite the fact of the territorial structure (24% of the county is mountainous area, 32% depression, and 44% of the county is lowlands), hydrographic network, important subsol natural resources, labor resources (90% of county population over 10 years have secondary or higher education), transport and communication network (road, railway and airport, telephone), geographical location (on the western border on the country), tourism resources (especially thermal waters), Bihor County does not record economic and social performance in accordance with the available resources. Infrastructure transport’s quality is below the national average, the average lifespan of the population in Bihor county is 72/82 years lower than the nation average (73/77 years) or regional (73/82 years), the average salary is falls consistently below the national average since 1999 till now, labor productivity is low, especially in industry, infrastructure and R&D investments are reduced.

According to statistical data on 2014, Bihor County is the in the leading places in the country to a number of indicators: 7th to employed population and number of employees indicators, 6th in active enterprises, 6th in the agricultural area and number 1 at the number of tractors, has an important contribution to the

export of machinery and electrical appliances and electronic products, footwear, textiles, food. However, since 2006, GDP/habitant has declined as a share of the national average, from 99.76% to 91.46% in 2011, and after monthly salary earning, Bihor County stood on the 41st place in 2013 (Bihor County Statistical Yearbook , 2014).

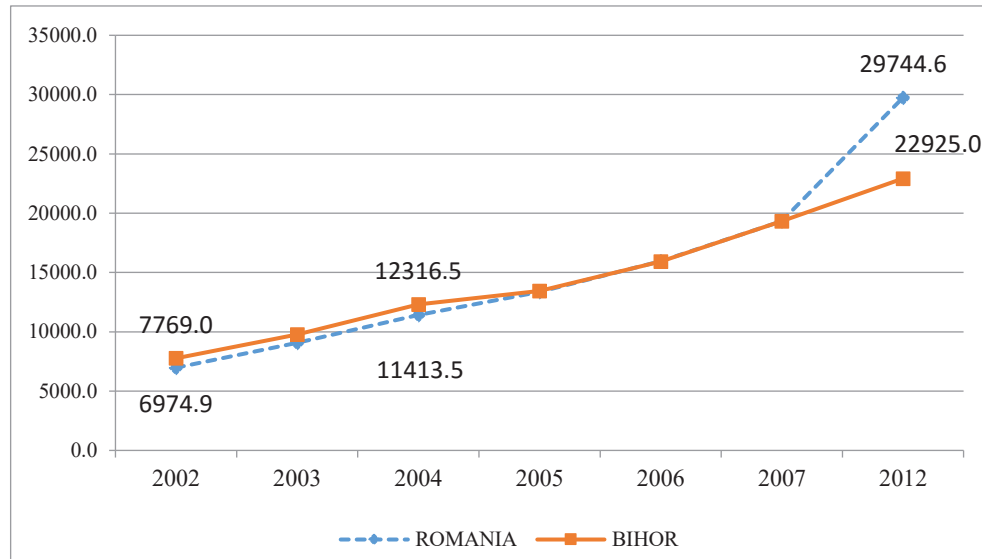


Figure 1: The evolution GDP per habitant (RON)

Source: NIS - Romanian Statistical Yearbook 2010, 2012; Bihor County Statistical Yearbook 2010, 2011, 2013; National Commission for Prognosis - Evolution of the main economic and financial indicators

We aimed to identify some characteristics of the labor market of Bihor and explain phenomena and Local Economic indicators in this market through the statistics included in the Statistical Yearbooks of the NIS and the statistical bulletins of the Bihor County Direction of Statistics.

The economic growth cannot be analyzed from the perspective of a single factor of production, given that inputs tend to bunch together, causing the concentration of economic activity (Easterly and Levine, 2001: 3). Therefore, it is important to correlate the technical and human capital, the investments, productivity, wages and national or regional policies for understanding the economic relations and for printing a certain trend of the economy.

The four indicators: employment, investments, wages and productivity, are not only eloquent in the labor market, but are closely linked. The investments are creating jobs, but can sometimes substitute jobs; employment can support or prevent investments. The labor productivity is influenced by investments, especially in technology, and it determines the evolution of salaries, but also the costs' reduction. Employment is in a close relationship with the wage level and productivity. Wage levels affect employment, meaning that a high level of salaries

is attractive to the working population. Also, it influences the consumption, and thus , the production volume, but also investments by the savings allocated in salary.

Capturing the evolution of these indicators in Bihor's economy and the factors that lead them, will allow us to draw some conclusions regarding the specific labor market in Bihor County.

Research questions:

1. What is the specific structure of Bihor's labor market?
2. To what extent were influenced the employment, the unemployment and the productivity by investments and technology?
3. How does it explain the low average salary in Bihor over other macroeconomic indicators?

What is the specific structure of Bihor's labor market?(by ownership, by sectors of the economy)

a) Bihor's labor market structure by ownership

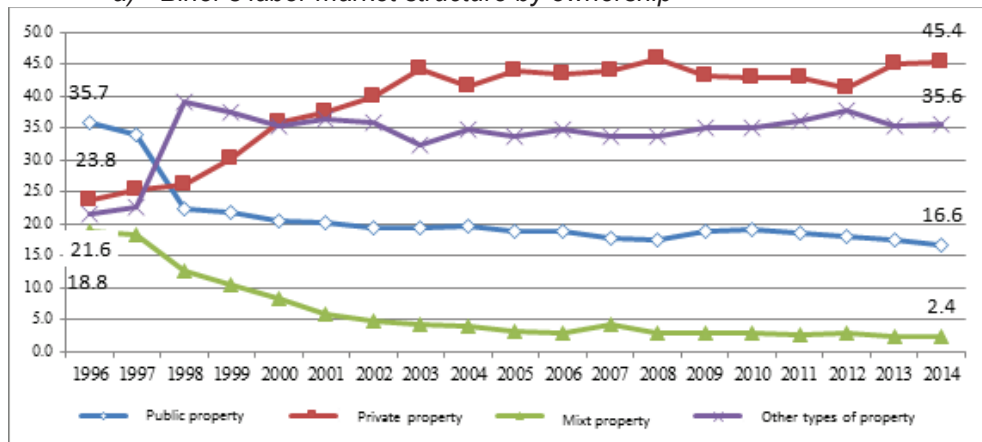


Figure 2: The evolution of employees by ownership on national (as a percentage of total employed population)

Source: NIS Tempo database



Figure 3: The evolution of the average number of employees by ownership in Bihor County (as a percentage of total employed population)

Source: NIS Tempo database

In relation to the situation at the national level, in Bihor County is a double weighting of public sector employees (33.2% vs. just 16.6%), which means that public institutions in Bihor County are more numerous than the national average, whether we are talking about administrative institutions, educational, health, public safety or welfare. Meanwhile, the separation of employees in the private sector as a higher share than those employed in the public sector was made only in 2002, as opposed to the national average, earlier in 1998. The explanation is that former privatization state enterprises were relatively few, and foreign investors were at first small investors, the large ones settling in the county, especially after the construction of the industrial park and the granting of facilities.

b) Bihor's labor market structure by economic sectors

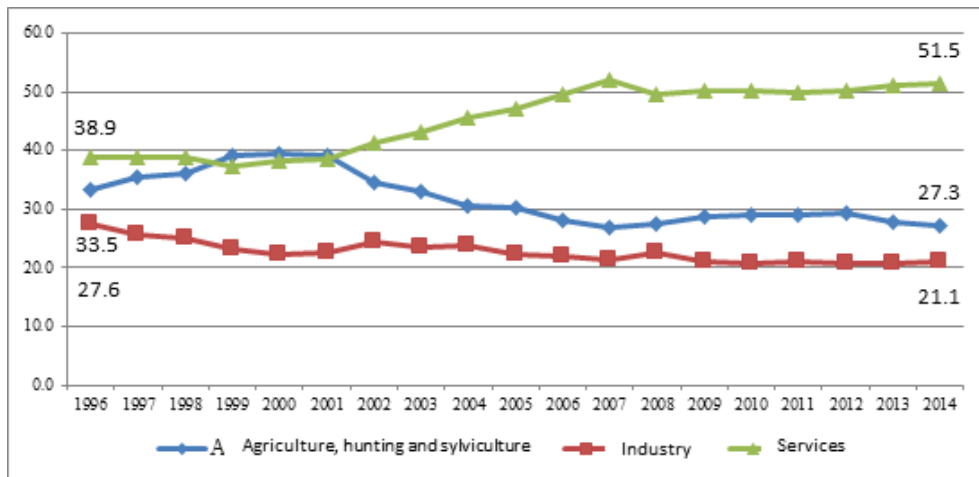


Figure 4: The evolution of civil employment by activity of national economy in Romania (% of total employed population)
Source: NIS, Tempo database

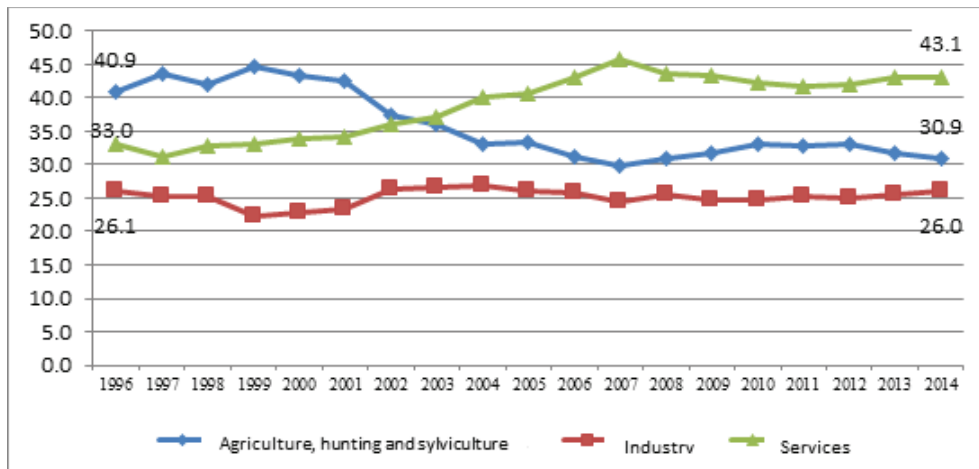


Figure 5: The evolution of civil employment by activity of national economy in Bihor County (% of total employed population)
Source: NIS, Tempo database

A first observation is that, in Bihor County, the population occupied in agriculture, the sector with the lowest productivity is 3% above the national average, in industry, 5% higher than the national average and in services, 8% less than the national average. This situation, indubitably affect the level of labor productivity and hence, the wages, adding to the low productivity in agriculture the higher productivity that is expected in the service sector, this sector being underrepresented in Bihor County.

Investments, employment and unemployment in Bihor County

a) *Investments Level*

Table 1: The evolution of the number of active local units by size class in Bihor County

Size class	Year						%increase compared to 2012
	2008	2009	2010	2011	2012	2013	
0- 9 people	1694 9	1642 4	1448 9	1292 7	1376 3	14291 (87,66%)	3,84%
10 – 49 people	1541	1507	1510	1633	1657	1687 (10,34%)	1,81%
50 –249 people	308	257	235	274	269	275 (1,68%)	2,23%
250 people and over	52	41	41	51	54	49 (0,30%)	-9,26%
TOTAL	1885 0	1822 9	1627 5	1488 5	1574 3	16302	3,55%

Source: NIS, Tempo database

Like everywhere else in the European Union, the small and medium enterprises represent the overwhelming majority of the total number of enterprises, but also of the number of employees. Their advantage lies in much greater flexibility in relation to large enterprises. In the above table, it can be seen that percentage, the large enterprise have suffered the most during the economic crisis, while losses among the remaining firms were smaller and with a faster recovery.

But if we take into account the number of employees and investments, they were registered in higher levels in large enterprises. Differences in productivity explain to a large extent the changes in income from various countries, and technology plays an important role in ensuring a high level of productivity. But cutting-edge technology is the prerogative of the highly developed countries or transnational companies, given the high costs that are involved in research and development of new technologies. In this case, the chance of small countries lies in the diffusion of international technology, either through foreign trade or through foreign investment, which could lead to a convergence of levels or rates of productivity growth and increasing economic integration (Keller, 2004).

Table 2: The evolution of net investments for active local units, by size class (thousand lei, current prices)

Year	Total	of which: by size class, as average number of employees			
		0 - 9	10 - 49	50 - 249	250 and over
2004	963,857	210,462	220,502	155,923	376,970

Year	Total	of which: by size class, as average number of employees			
		0 - 9	10 - 49	50 - 249	250 and over
2005	1,317,685	352,917	295,080	292,329	377,359
2006	1,633,911	391,942	344,207	295,966	601,796
2007	2,158,111	697,303	514,991	410,289	535,528
2008	1,969,297	533,814	562,047	464,322	409,114
2009	2,021,924	455,989	537,894	319,762	708,279
2010	1,830,745	528,585	363,444	382,099	556,617
2011	2,202,429	489,522	522,939	571,207	618,761
2012	2,037,340	606,907	438,119	335,970	656,344
2013	2,206,858	796,994	467,613	244,161	698,090
		<i>% of total</i>			
2004	100.0	21.8	22.9	16.2	39.1
2005	100.0	26.8	22.4	22.2	28.6
2006	100.0	24.0	21.1	18.1	36.8
2007	100.0	32.3	23.9	19.0	24.8
2008	100.0	27.1	28.5	23.6	20.8
2009	100.0	22.6	26.6	15.8	35.0
2010	100.0	28.9	19.8	20.9	30.4
2011	100.0	22.2	23.8	25.9	28.1
2012	100.0	29.8	21.5	16.5	32.2
2013	100.0	36.1	21.2	11.1	31.6

Source: NIS, Tempo database

The largest share of investments is found in large enterprises, followed by micro, small and medium enterprises. On the one hand, the needs of large enterprises on investments are higher in relation to small and medium enterprises; on the other hand, large enterprises have easier access to finance. Along with investments size, must be taken into consideration their destination, because the technology investments are generating added value and thus an increase in productivity and income. Such investments are, however, more often the preserve, large enterprises, given the high cost of advanced technologies.

b) *Employment*

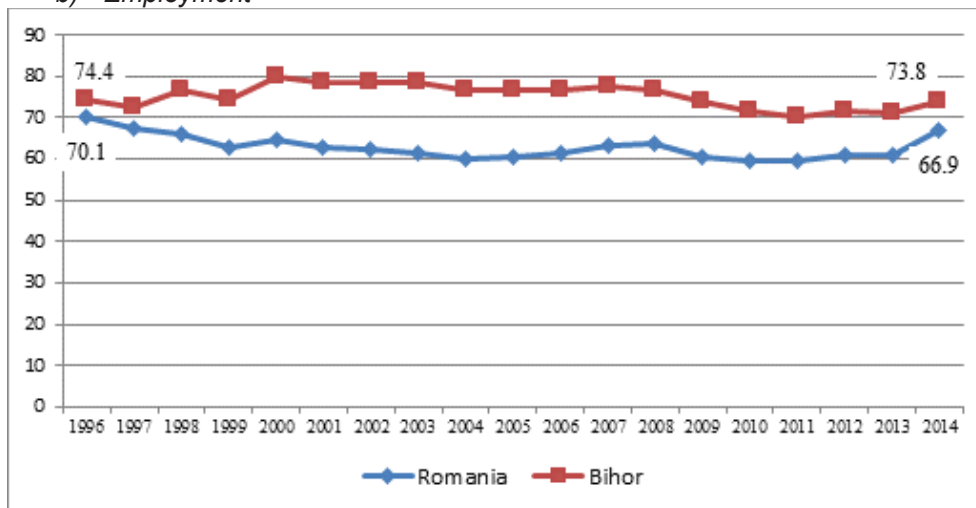


Figure 6: The evolution of employment rate of labor resources
Source: NIS, Tempo database

The employment rate in Bihor county is above the national level, similar to the European average, so in line with the objectives of the EU 2020 strategy, even if the Bihor economy's structure is not favorable to achieve higher productivity and a high level of average wages.

c) *Unemployment level*

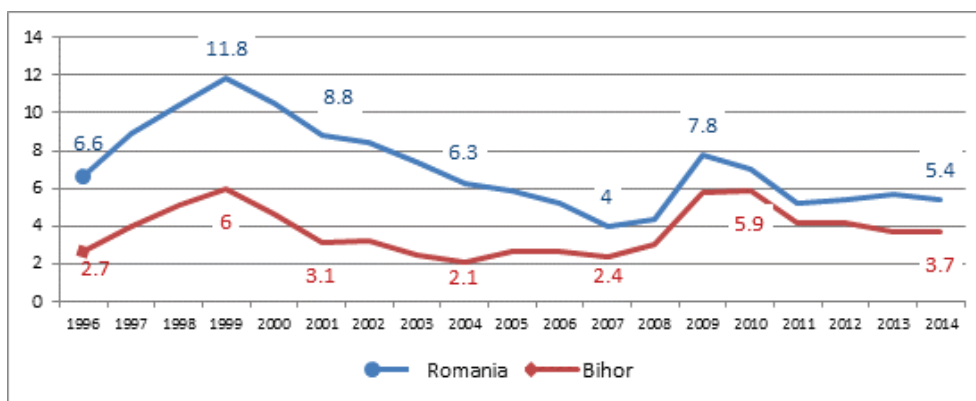


Figure 7: The evolution of unemployment rate
Source: NIS, Tempo database

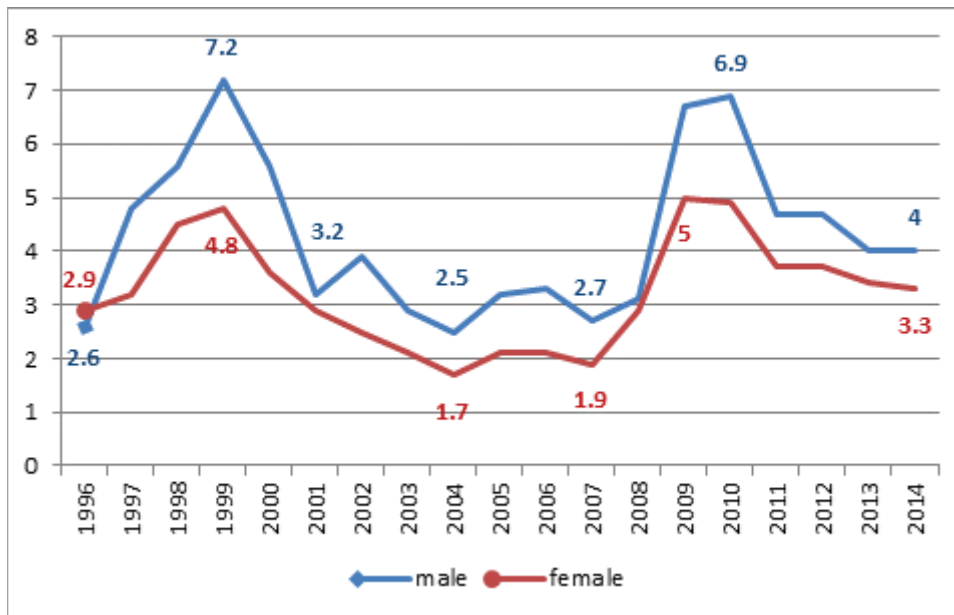


Figure 8: The evolution of unemployment rate by gender in Bihor County
Source: NIS, Tempo database

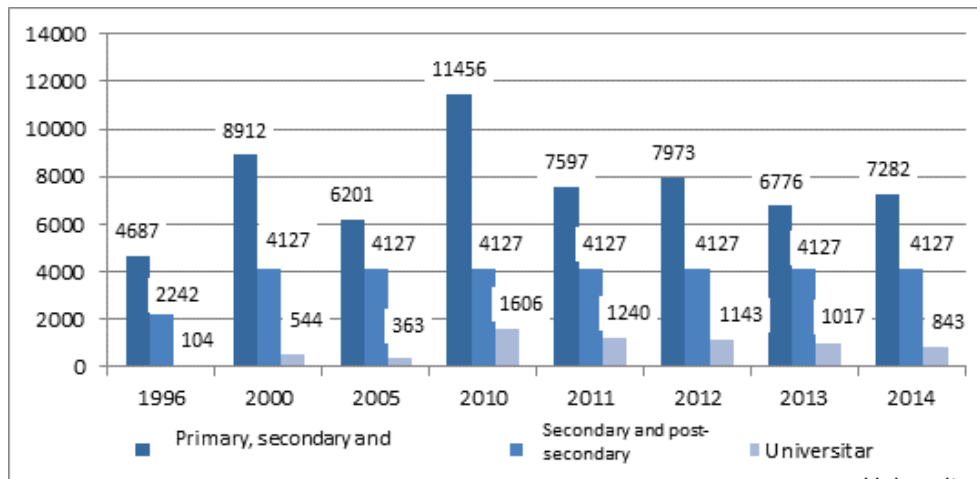


Figure 9: The evolution of the registered unemployed by education level in Bihor county
Source: NIS, Tempo database

The unemployment rate has been consistently lower in Bihor County,

practically half of the national average, except during the economic crisis (2008 - 2012) when the two levels approached. The situation is that manufacturing offers a large number of jobs, as well as commercial activities favored by positioning the county on the western border of the country; a part of the working age population has emigrated, and another part (hard estimated) is found in the informal economy.

The least affected by the employment are women (more influent in commerce and light industry, but also in areas of the budget) and those with a high level of education. Although neither those whose level of education is low, does not seem to be exposed to a serious risk of becoming unemployed; in fact, these categories, mostly, are dealing with agriculture in their own household, some of them working as day laborers . These categories are not formally registered as unemployed, in reality they represent a hidden unemployment.

Level of unemployment benefit (75% of the Reference Social Indicator, which is currently 500 lei, plus percentage rates vary according to length of employment), which is low and is granted for a relatively short period (6 -12 months) correlated with the minimum wage, plus the growth and diversification of the economy, as well as numerous training courses, determine employment option.

Labor productivity and wages in Bihor

One of the most efficient macroeconomic indicators used to measure economic performance of a country, a region a sector or a company, is productivity. This indicator is in its close interdependence with other indicator such as: employment, wages, investments, economic structure.

The complexity of labor productivity derives from the multitude of factors that influence and can be divided into several categories:

- Economics: investments, economy's structure, work's organization, employment rate
- Technics and technologies: technology production levels, leading economic branch
- Demographics: age and sex structure of the population
- Social: quality or workforce, education, attitude to work, quality of working environment, labor relations, quality of management
- Natural: relief, climate, hydrographic, soil's fertility, subsoil riches
- Biological: health and food quality
- Psychological: motivation, interests, skills
- Physico - chemical: temperature, humidity, noise, lighting

Equally, labor productivity is essential in terms of economic results that it generates: productivity growth, costs reduction, income growth, wages growth, saving labor resources, economic competitiveness.

Labor productivity is calculated as ratio between gross domestic product and employment, or for a greater economic efficiency, as the ratio of value added and total hours worked. In Romania, not only that labor productivity is below the EU average, but maintaining relatively constant in terms of increasing the EU average, productivity gaps are growing.

Table 3: The evolution of labor productivity (Euros/hour)

Country/year	2008	2009	2010	2011	2012	2013	2013/2008
Eu 28	31,2	30,7	31,4	31,8	31,9	32,1	+0,9
Eu 18	35,9	35,5	36,3	36,7	37	37,3	+1,4
Romania	5,6	5,4	5,3	5,4	5,4	5,6	0

Source: Eurostat, 2014

While the GDP per capita in Romania represents approximately 27.5% of EU-28 GDP, labor productivity (measured as the added value and the total of worked hours) is approximately 18% of the EU average, which can be explained on one hand, by the lower level of prices in Romania, but also the greater number of working hours (1st place in the EU in 2012, with 41.2 hours compared to Italy (38 hours), France (37.9 Hours) and Finland (37.6 hours), on the other hand (Eurofound, 2012), by the structure of the economy and the development rate of exchange. However, beyond these objectives, Romania is facing some problems regarding the labor efficiency in a range of economic activities, which could require greater attention on measures to boost the productivity.

A generic way to increase the productivity would be the design and the implementation of some economic policies that combine high productivity jobs with a high employment level, which would improve the structure of economy and technology investment performance. In other words, it requires the development of the services sector, especially those with a high added value, improving the technology used in industry and increasing the export value.

Currently, the agricultural sector productivity much below the national average and a large share of the workforce with technology modestly used in industry and a service sector underdeveloped, labor productivity, although increasing, remains below which could provide a significant wage growth. Romania's active population holds jobs with low productivity, achieving modest incomes.

Regarding the Bihor County, the GDP per capita in 2014 was 6384 Euros (much lower than the average of 7.500 Euros), with significant fluctuations in 2008-2014, a period that includes the economic crisis.

If we take into account that the highest productivity is in the banking sector (in services, in general) and the lowest in agriculture, branch where employment is still 30.9% (a decreasing of 10% compared to 1996), but a higher percentage than the national average (27.31%), it is understandable that this is a major factor in the low level of labor productivity. Given the fact that employed population in the tertiary sector increased over the same period, (1996 - 2014) by 10%, the employed population in industry has remained relatively constant, and productivity in services should be higher than in industry, it is expected to grow the labor productivity in the Bihor economy's ensemble. The fact that it did not happen like that, can be explained by the lack of training effect of the labor productivity in the banking sector in the rest of economy, consisting of high costs of financial intermediations and the share of the informal economy and low productivity in services. It would be added and low investments in top fields of economy and

possibly a skills shortage in certain segments of the economy.

Given that in manufacturing, the highest productivity is recorded in the fields of coke, petroleum, tobacco, pharmaceuticals, metallurgy, automotive, and lowest in fields such as clothing, textiles, leather, furniture, first being less present in Bihor County, and least, predominantly, is understandable why labor productivity is low.

The largest share of all local active units in Bihor County is the wholesale and retail, followed by manufacturing, transport, construction and professional, scientific and technical. Most are labor-intensive industry, so they are less productive.

Labor productivity, separated from other productivity factors gives us only a partial image, possibly distorted, on the efficiency of economic activity.

Only an effort “of modeling and quantifying the total factors of production” (Easterly and Levine, 2001: 1) would be likely to intercept more objective the causes, but also the solutions for economic growth. The concept of “total productivity of the factors”, is, however, not strictly defined, some researchers saw him as a “model of changes in technology”, others highlight the role of external factors, some focusing on changes in the composition of the productive sectors, while others aim adopting production methods with lower costs.” (ibid).

The wages represent the most important form of income. Their level influence not only the standard of living of employees, being the main motivation of labor, but also the productivity and investments, through the salary’s part allocated to consumption, or saving.

Within the European Union, Romania occupies the penultimate place both on hourly labor cost (gross wages plus employer contributions), and in terms of gross hourly wages (Eurostat, 2015).

Often low hourly cost of labor is considered an element of competitiveness and profitability, causing even the relocation of economic activities by economic areas in which this indicator is low. In fact, competitiveness and profitability are associated with labor productivity that it depends on and the quality of the workforce, not just its low cost.

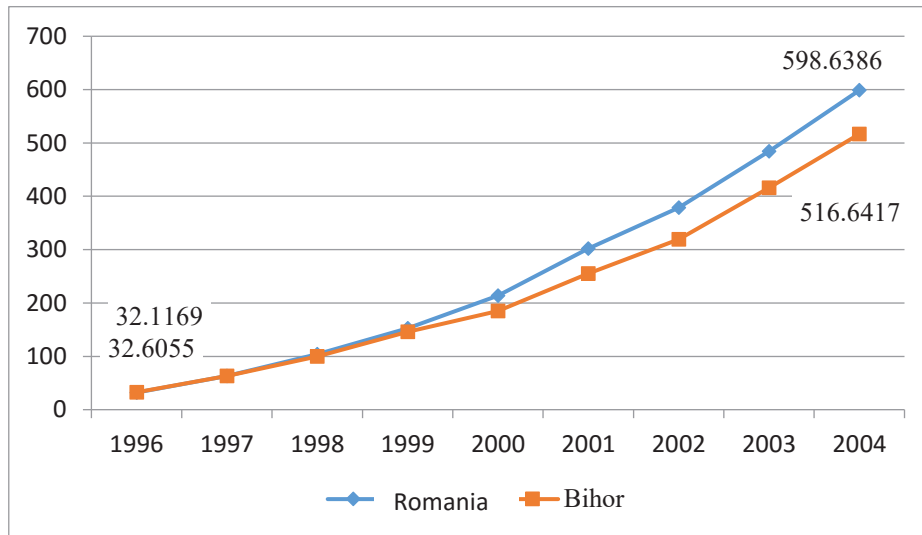


Figure 10: The evolution of the average net nominal monthly earning
Source: NIS, Tempo database

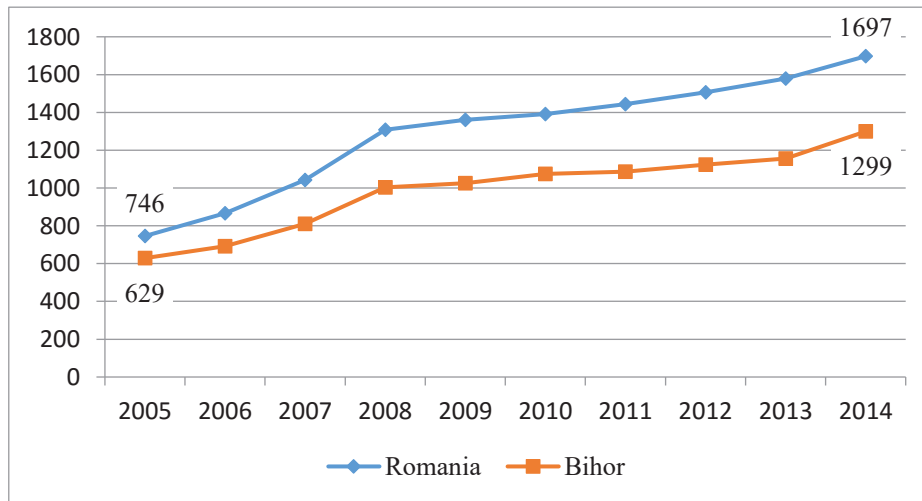


Figure 11: The evolution of the average net nominal monthly earning
Source: NIS, Tempo database

The low average wage in Bihor is a constant in recent years, from 1998 being

below the national average, with gaps that are increasingly higher, especially after 2005, which brought Bihor County on the 41th place among the counties of Romania in 2014. An analysis reveals that the main causes of this situation are:

- The economic structure of Bihor County. An economy where the share of agriculture, light industry, trade, ahead of manufacturing industry with high productivity and services sector, is providing low wages; in turn low labor costs attract investors engaged in labor intensive activities, type LOHN activities.
- A significant part of Bihor enterprises are bearing demands of modest qualified labor (vocation school graduates), which, by their lower level of education, accept lower wages
- Labor productivity is low and because of underinvestment in powerful technology which, itself, would contribute to higher productivity and hence wages.
- The level of public sector wages is lower than in other counties given that in Bihor are few regional institutions, many of them ongoing relocation to other counties, there are no institutions of national interest or subsidiaries, and some salaries, especially in the administration, depend on the size of the territorial administrative structure, a situation that can easily disadvantage Bihor County.
- The shortage of skills and abilities in relation to the application of certain high-skill areas (IT, engineers, doctors)
- The unequal territorial distribution of economic entities in the county, makes in certain areas, such as Oradea, to exist a high concentration of business and labor, and in other areas, for example Beiuș the number of employers to be small, hence low offer of employment and high demand which enables employers to establish low wage levels
- The low unemployment rate shows that Bihor people prefer to have a job and are willing to accept low-paid jobs

Conclusions

The Bihor's economy indicators follow the same logic as the national level: the employment rate is high, the unemployment is low, the average wage among the lowest and low productivity, noting that although GDP per capita in Bihor County, at least until 2007, was at or above the national level, wages remaining consistently below this average. Guilty of this situation could be also the informal labor market, especially the gray market rather than the black, i.e., removing only a portion of the revenue from taxation. A pertinent study in this regard could argue the need for public policy to legalize the informal labor market.

The demographic changes: reducing the birth rate, aging population, labor migration have affected the labor market in Bihor County. Being a border district in the west part of the country, it was early and to a greater extent affected by emigration, which led to a lack of specialists in a number of fields. The rush of investors after profit at the expense of cheap labor, could be countered by a better

selection of investors, given the strength of highly qualified labor in certain areas in Bihor County, along with the provision of facilities, but also imposing conditions regarding the level of investment in performance technology. Investing in technology can increase the productivity and therefore income, including wages, but influencing the employment, often upside it (high earnings and good working conditions are attractive for employees), but it also could reduce the employment rate (due to layoffs imposed by the introduction of technology, namely due to staff reductions in productivity increase). Moreover, a study on the employment rate in Romania, shows that "in Gorj County is recorded a low employment rate, although earnings are high and, on the other hand, in Bihor County, although gains are small, the employment rate is high" (Aparaschivei 2012: 16); the paper concludes that the employment is exercised "a positive effect ... from gross earnings and investments and a negative effect exercised by the labor productivity" (ibid: 21).

The shortcomings identified in the labor market of Bihor County could be overcome by a more aggressive strategy of local authorities to attract investors who could improve conditions for the growth of wages, which could make better the upper qualified workforce in Bihor County, interested investors of the development of long-term projects in Bihor County. Another solution could be represented by the identification of specific ways of optimal distribution in the territory of the economic entities to create competition, including attracting the workforce.

A conclusion aimed not only in Bihor County, in each territorial administrative unit that lies in the need to know, anticipation and preparation to face the globally trends with implications on the local labor market: risks posed by deindustrialization, the relocation of transnational companies in recital labor cost, the disappearance of specific occupations of the industrial era and the emergence of new ones, specific to post industrialism, trend change on working time (decrease, but also its flexibility), the real needs in the future society. It is important also the design of a model of long-term growth and appropriate local policies that are able "to increase the efficiency of capital and workforce or alter the rate of endogenous technological changes, to boost productivity and thus, to accelerate long-term economic growth." (Easterly and Levine, 2001:4)

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