

Educational Influences for the Imbalances of the Bacau County Labour Market

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Abstract: *The aim of this paper is to distil the lessons for the imbalances of the Bacau county labour market. Firstly, this study will analyse the state of Bacau county labour market. Secondly, it will shortly review the evolution of Romanian educational results. Thirdly, we will reveal the imbalances of the Bacau county labour market and the educational influences. We will not provide a sector-wide analysis, but we will highlight some ideas related with the reform of educational sector and the evolution of Bacau county labour market.*

Keywords: *Bacau county, Romanian educational system; PISA results, Labour Market*

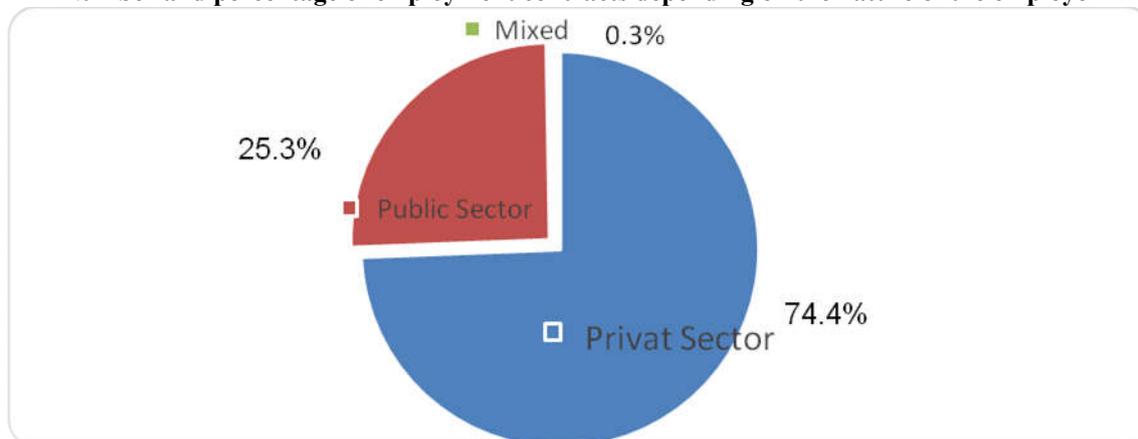
Introduction

Bacau county is located in the North-East of Romania. Now it has almost 600000 inhabitants, as a result of migration, but over 10 years ago, the county had over 750000. On October 31, 2019, the main indicators of the labour market are:

- number of active employers: 20908;
- number of active employees: 126123;
- number of work contracts: 130400;
- unemployment rate: 5.1%;
- 10802 people are looking for a job;
- the profile of unemployed: male (58.77%), rural origin (77.85%), 14.85% - without education, 55.73% - low level education (primary, secondary and vocational education / arts and crafts);
- just 26.47% of unemployed people have an average level of education (high school and post-secondary education) or 2.95% - higher level (university education).
- employed population (on January 1, 2019): 199400; work resources: 360100; the balance of the inter-county labour force movement: - 2100 persons.

Depending on the nature of the employer, we obtain the following chart:

Chart no. 1
Number and percentage of employment contracts depending on the nature of the employer

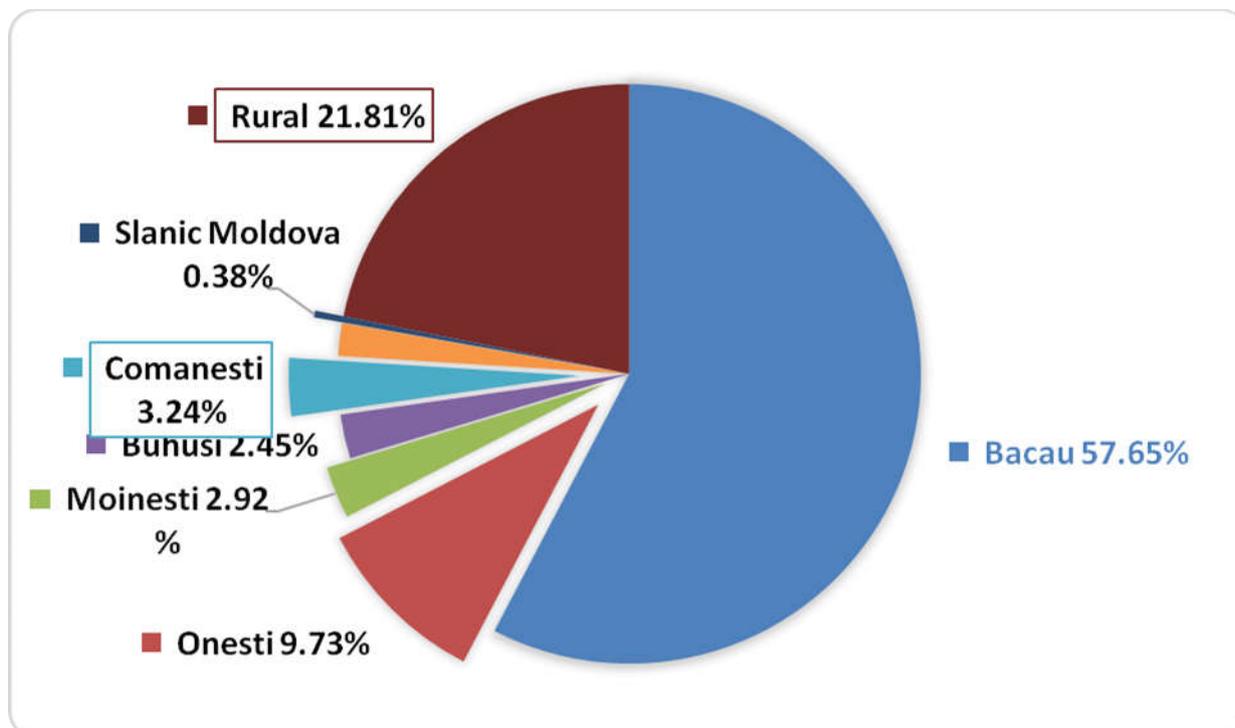


Data source: Bacau Territorial Labour Inspectorate; own processing

Depending on the belonging to the rural or urban environment, we obtain the following graphic:

Chart no. 2

Percentage of employment contracts depending on the belonging to the rural or urban environment



Data source: Bacau Territorial Labour Inspectorate; own processing

Bacau Municipality has over 55% of the employment contracts. On the rural area there are only 22% of the contracts.

1. Contextual Elements in Romania's Educational System

For an objective evaluation of the educational sector in Romania, we will use the indicators of the PISA test, administered by the OECD [1]. The reasons are, on one hand, the OECD applies the same type of test since 2006, once every 3 years, and therefore we can see an evolution in time of Romania's results. On the other hand, we can compare the results obtained by Romanian students with the results of those from other educational systems.

The PISA test [1] is applied to the 15-16 year-old persons from over 70 countries, following a methodology which ensures that the results are representative. In Romania, in 2018, it was applied to over 5,000 students. The test measures the performance in Mathematics, Science and Reading, on 6 steps of cognitive activity: the first one checks the ability to identify and name phenomena of the surrounding world; gradually, at the second and third levels, it is checked to what extent these young people manage to operate with abstract notions, given predictable contexts; to what extent they can apply rules or thinking algorithms, starting from easily identifiable doings in controlled contexts; levels 5 and 6 validate high skills of making connections between notions and information, to permute or organize them creatively, to make analyses and hypotheses, to discriminate relevant data from those that are irrelevant to the subject of the discussion. Thus, there are no knowledge assessment tests, but the use of thinking, the ability to use it in useful, new contexts.

In the table below we have put the data obtained by Romanian students in the 5 PISA tests:

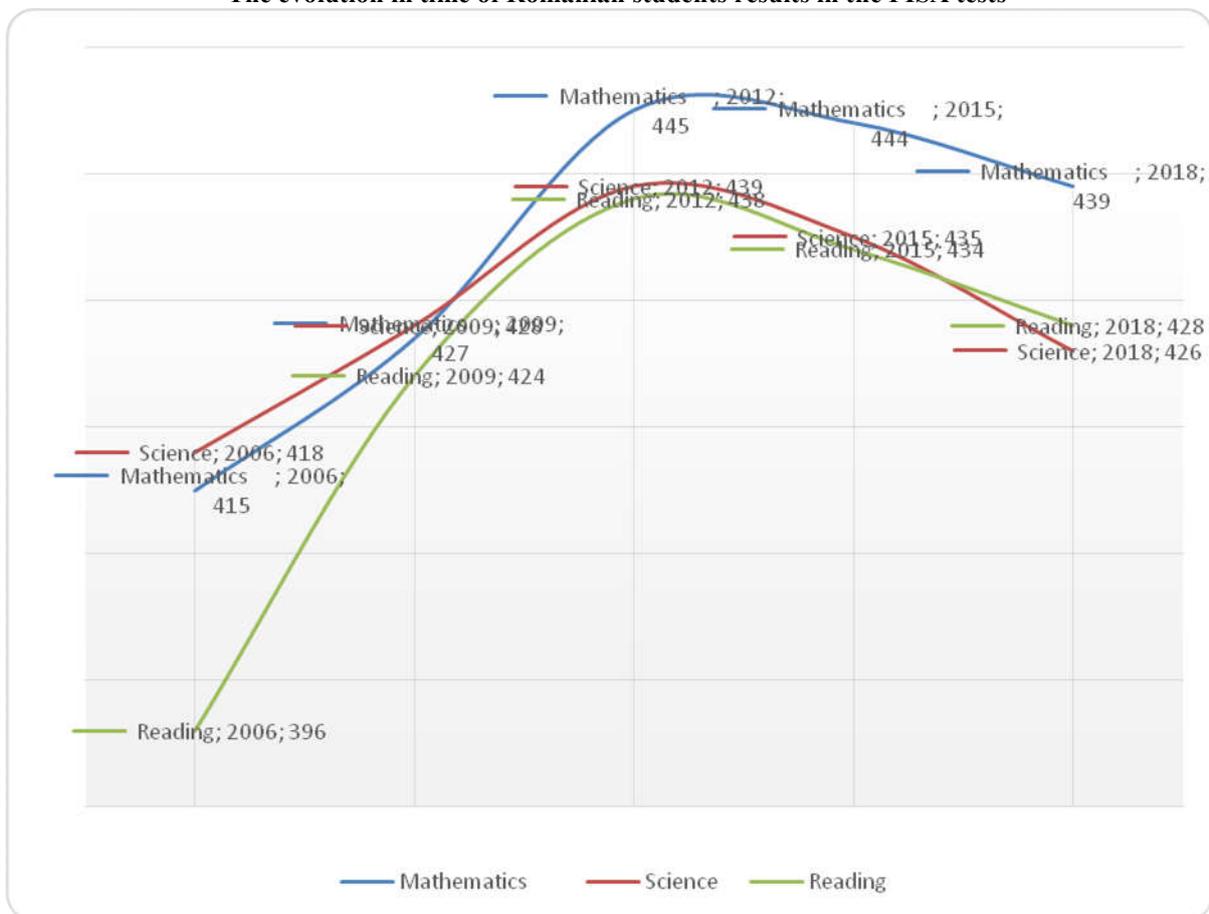
Table no. 1
The data obtained by Romanian students in the PISA tests from 2006 to 2018

Year/Domain	Mathematics	Science	Reading
2006	415	418	396
2009	427	428	424
2012	445	439	438
2015	444	435	434
2018	430	426	428

Data source: www.oecd.org; own processing

The data from table no. 1 are graphically represented to see the evolution in time of Math, Science and Reading results:

Graphic no. 1
The evolution in time of Romanian students results in the PISA tests

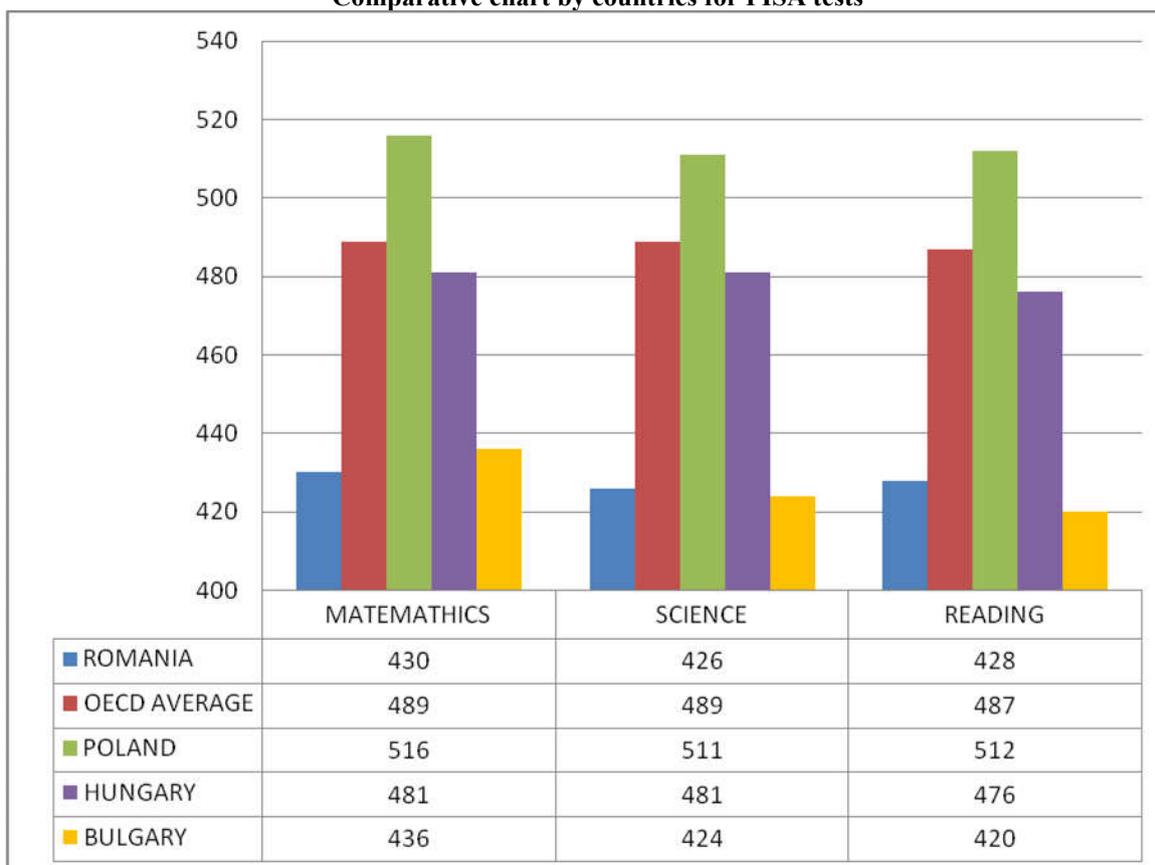


Data source: www.oecd.org; own processing

The data shows us progress in all years compared to 2006, but also a stagnation, even a slight decline in 2018 compared to 2012 and 2015.

The 2019 PISA study, released with tests in 2018, places Romania Sciences at 426 points in Science, compared to the 489 average score of the OECD countries. On the Reading side, Romania accounted for 428 points, and for Mathematics 430 points. The chart below reflects the scores obtained by the Romanians.

Graphic no. 2
Comparative chart by countries for PISA tests



Data source: www.oecd.org; own processing

The above graph shows the regress of Romanian education in recent years. Moreover, we are in the last quarter of the rankings, well below the average, somewhat on a par with Bulgaria, but much under Poland or even Hungary.

Study data also highlights the dispersion of students on performance levels. Thus, the share of Romanian performers in total (levels 5 and 6) is 4.1%, while the share of the lower levels (1 and 2) is 29.8. The OECD average is 15.7% and 13.4%, respectively. But the Romanian students obtain notable performances at the Olympics. In this situation, good results appear to belong to individual performance areas rather than as part of the educational system's effort to generate performance.

Finally, we are also interested in the capacity of the educational system to generate equity. For the purposes of the OECD, this is a complex concept delimited on two related objectives: inclusion and fairness. A pupil is considered resilient if he/she is in the last quarter of the country at the moment of the study, in terms of socio-economic status. Therefore, we can consider that the chances of raising children with material and social difficulties by education in Romania are extremely low. [2, 201]

The first concerns the objective of ensuring that all pupils, especially those from disadvantaged backgrounds or traditionally marginalized groups, have access to high quality education and reach a basic level of competence. Fairness refers to the objective of removing obstacles from the path of the full development of the talent, which comes from the economic and social circumstances over which individual students do not have control, such as unequal access to educational resources in the family and school environment. At this level, according to the study, the average difference between advantaged and disadvantaged students in reading is 109 points, compared to an average of 89 in OECD countries. However, 9% of disadvantaged students are academically resilient (OECD average: 11%).

2. The Movement of Bacau County Labour Market and the Educational Outlooks

In the context in which the labour market of the Bacau county is now, what could be the evolution of the labour market and the solutions that could be suggested to solve the issues outlined above?

The new entries on the supply side of the labour force may arise from migration, graduates of educational institutions and from the reconfiguration of labour resources.

The data about the movement at labour market can be resumed in the next table:

Table no. 2
Evolution of employment contracts in Bacau County

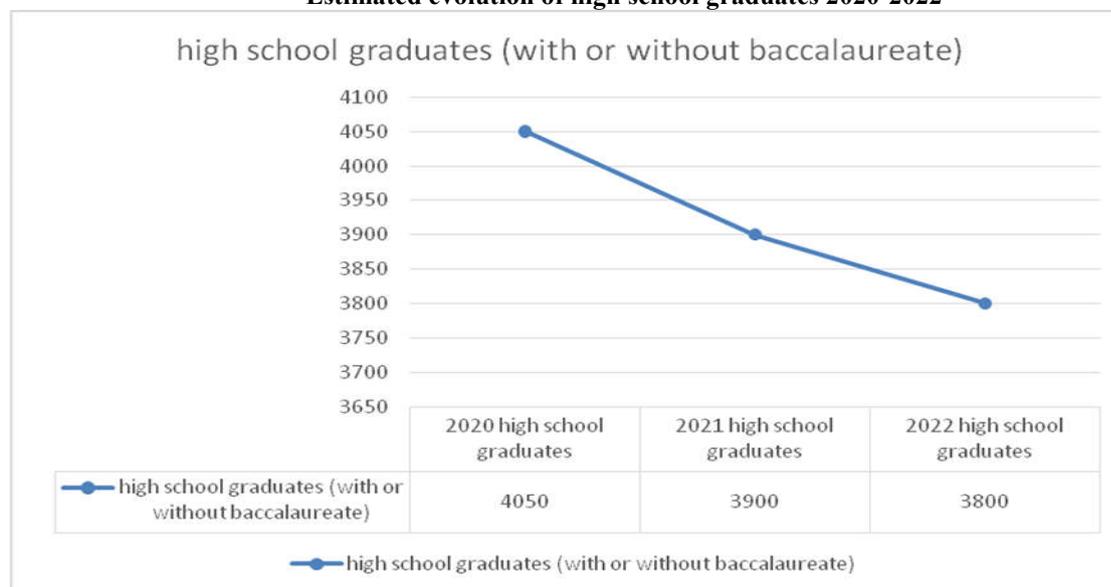
Form of ownership of the employer	Number of contracts on October, 2019	Number of contracts on October, 2017	Absolute variation	Percentage variation %
Private property	97007	97247	-240	-0.25
Public	33043	29922	3121	10.43
Mixed	350	616	-266	-43.18
total	130400	127785	2615	2.05

Data source: Bacau Territorial Labour Inspectorate; own processing

The number of employment contracts in Bacau County increased by only 2% in October 2019 compared to October 2017, with a slight decrease in the private area, but with a 10% increase in the public area.

We estimate a small reduction in the number of jobs in the budgetary sector, but, considering the negative internal and external migration, we believe that the labour market will be slightly restricted in the next three years.

Graphic no. 3
Estimated evolution of high school graduates 2020-2022



Data source: <http://www.isjbacau.ro/>; own processing

The estimated evolution of high school graduates was based on the number of students enrolled in the lower classes. For 2020-2022 year, we observe a decreasing number of students.

In Bacau county, there are two universities, which, together, have over 7000 students. We estimate an annual number of about 2500 graduates, which will remain constant over the next three years.

Conclusions

From the ethical point of view, both the educational system and the labour market are marked by inequality. In education, this study shows that the chances of raising children with material and social difficulties by education in Romania are extremely low. At the labour market, although the Bacau municipality has about 25% of the county's population, over 55% of the employment contracts are here. Although over 50% of the inhabitants are from the rural area, only 22% of the contracts are there.

Although the level of unemployment is about 5%, being a functional one from a theoretical point of view, the profile of the unemployed (predominantly rural, with low education) shows us a reduced mobility, with difficulties in employment. On the horizon of the next 3 years, we cannot estimate a reduction of pressure on employers. The number of graduates decreases, many of them are tempted to go abroad, and the balance of the movement in the inter-county labour force market is negative for the Bacau County.

Within 3-5 years, the pressure to find employees for jobs with reduced education will be tempered by the introduction of new technologies (robotization, computerization), but the pressure for highly qualified personnel will increase. The number of new employees will be going down, except the situation when a large group from work resources will accept to work formally (the indicators shows nearly 100000 persons working with subsistence agriculture or beneficiaries of social aid). In this case, the solutions are in education and new rules for social care.

We also consider, following the Căprioară & Niță study [3, 15], that the "school dropout and migration will continue to have alarming values for years to come. The strategic solution is in decentralization and deconcentration, in decreasing the share of centralized decision-making and in increasing the decision-making power of local authorities, communities, economic agents and the non-government sector".

At the operational level, the educational solutions are: changing the structure on programs in high school education (By processing the data regarding the number of places in high school in Bacau County by types of profiles, it turns out that the theoretical profiles have allocated about 50% of the places, while the technical, economic and vocational profiles only the rest); adapting the educational programs to the social, economic realities, increasing the number of hours available to the schools / local communities; rethinking education in rural areas and allocating resources to prevent abandonment; increasing the attractiveness of the vocational schools and changing the image of the craftsman (at this moment the criterion of enrolment in the vocational schools - the lowest grades, the weakest students, etc.); increased involvement of economic agents in improving and professionalizing students (we note initiatives such as investments in professional classes - Aerostar, food industry - International Agriculture, scholarships for students - Dedeman, Electric Plus); increasing the direct interest at employees in the prosperity and success of the company, not only the migration to better salary offers; rethinking work from the view as transaction (I pay you, you work, no matter how you feel), towards building entrepreneurial organizational cultures, which respect the person, that address the needs of the employee in his relationship with the community he comes from, which increase the meaning of man in the workplace; we must understand that the Bacau county is in a competition with the inter-county labour market, that people come and go depending on the opportunities offered by the community, by the quality of public services (utilities, education, health, etc.) and by the possibilities of leisure time.

References

- [1] OECD (2019), PISA 2018 Results (Volume I): *What Students Know and Can Do*, PISA, OECD Publishing, Paris, <https://doi.org/10.1787/5f07c754-en>
- [2] OECD (2016), PISA 2015 Results (Volume I): *Excellence and Equity in Education*, PISA, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264266490-en>
- [3] Căprioară A., Niță N., *The Romanian Educational System between Challenges and Opportunities. The All-knowing Teacher and the Ignorant Student*, Economy Transdisciplinarity Cognition, Vol. 20, Issue 1/2017, pp. 12-16