ABSTRACT
The aim of this paper is to highlight the way in which the number of students, during 2000-2012, has been influenced by the evolution of the number of bachelor's degree programmes. Its purpose is to identify the main changes in the evolution of the number of people who underwent bachelor studies in the aforesaid period – this cycle of studies is the first step in pursuing a higher education form. For this article, a period of five years before the introduction of the Bologna system has been taken into account and also, eight years after its implementation. The result of the study is represented by the identification of the consequences produced by adding / removing study programmes in the number of students in the pre-Bologna and Bologna system.

KEYWORDS: evolution, Romania, higher education, student, study program.

JEL CLASSIFICATION: I210 Education Analysis

INTRODUCTION
The Romanian higher education system has gone through many changes generated by many reforms implemented after 1989, as well as by other legislative changes in the field. Taking into consideration that competitiveness has become a fundamental principle of globalization and internationalization, in higher education, a strategic management was necessary to be implemented in universities.

The current National Education Law, no. 1/2011, provides the fundamental principles governing schools and higher education, and also the principle of university autonomy, guaranteed by the Constitution. According to the Romanian legislation, university autonomy entitles the university community to setting its own aims, its institutional strategy, structure, activities, organization and operation of their own material and human resource management.

Therefore, due to the legislative context in Romania, universities, either public or private, have the right to establish the type and content of their own study programmes, according to the job market, in order to attract more students. It should be taken into consideration the fact that, when we talk about the implementation of management practices in higher education institutions, more aspects should be taken into account, including indicators of the number of students (by education forms, the place where the courses are organized, the number of teachers, the ratio between the number of staff/students, the number of higher institutions and the number of study programmes they organize).

According to National Law of Education, it is already known that bachelor’s study programmes is the first step in pursuing a higher education form, so that I considered that an analysis of the evolution of student number enrolled at this type of study programmes, simultaneously with the number of study programmes offered by higher education institutions from Romania, would be useful.

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This article presents not only an analysis of the number of bachelor’s degree programmes, accredited or temporarily authorized to function per the existing higher education providers in Romania, but also the evolution of the number of students in the last 13 years.

1. BACKGROUND AND THEORETICAL FRAMEWORK

In the context of the current economy, mainly in public and private sectors, education is considered as a product to be consumed, and consumers are reluctant to make the difference between one supplier or another, and more specifically between higher education institutions, and they tend to take into account other factors, such as the price and quality of services they provide. (Hockely, 2007).

The aforementioned statement can be explained by the fact that in Romania, the legislative context after the 1990 has led to the establishment of private universities and new public universities. Even if after 1990 we have witnessed a time when higher education legislation system knew a vacuum, in the sense that it did not exist an education law to accommodate the new situations in Romania, the basis of the higher education system has been put between 1993 and 1997. After 1990, the first agreements regarding the high education system were reached in the Law no. 88/1993, which mentions that the higher education institution are established by law, Law no. 84/1995, of Education and Law no. 128/1997, which is the status of teachers.

The normative acts mentioned above represent the basis of the higher education system decentralization, which had two important consequences: the development of university autonomy, and the functional repositioning of universities in relation to the ministry. Therefore, universities were empowered by the Ministry to decide in a number of areas and particularly on the management system they want to implement and study programmes they wish to organize, under the law in force at the time of registration of students in the first year of study. (Brătianu & Lefter, 2001).

In 2004, Law no. 288 regarding the organization of undergraduate studies was enforced, and it mentions the basic framework of three cycles of higher education qualification adopted through the Bologna Accords.

Whilst according to the Law no. 84/1995, higher education was structured on two levels - graduate (long and short) and postgraduate education (postgraduate specialist, masters, academic postgraduate, doctoral, postgraduate specialization and postgraduate courses), Law no. 288/2004 implemented university studies structured on three cycles (1st cycle - Undergraduate studies, 2nd cycle - Master studies, 3rd cycle - Doctoral studies) and postgraduate education (postgraduate specialization and postgraduate courses). Once Law no. 288/2004 was enforced, Master studies and Doctoral studies were not assigned anymore to the type of education called "postgraduate".

In February 2011, the Law no. 1/2011 of national education was adopted. It repeals Law no. 84/1995 that was not updated in accordance with the Bologna Accords. According to the Law no. 1/2011, higher education in Romania is structured as follows: graduate education (1st cycle - Undergraduate studies, 2nd cycle - Master studies, 3rd cycle - Doctoral studies) and postgraduate (postgraduate programmes of training and continuing professional development and advanced research postdoctoral programmes).

The legal framework of the organization of bachelor university studies provides that accreditation of bachelor study programmes and establishes that the maximum number of students that can be enrolled in a programme and who may be awarded a diploma certifying graduation of final study exam, is performed by Government decision, after an external evaluation is carried out by the Romanian Agency for Quality Assurance in Higher Education or by another agency of quality assurance in the country or abroad, such as European Quality Assurance Register for Higher Education. Bachelor's degrees correspond to typically 180-240 transferable study credits and the duration of studies is usually 3-4 years and corresponds to a minimum of 60 transferable credits per year. (Law no.1/2011).
2. RESEARCH METHODOLOGY

To achieve the aims of the proposed study regarding the number of students enrolled in Romanian universities, the following indicators were taken into account: the number of students enrolled in each study program, the city in which the higher education courses are delivered, the form of education (full-time or part-time) and the number of foreign students. Moreover, the rate of students enrolled at Romanian universities per 10,000 inhabitants, the evolution of the number of teachers and the number of students / teacher were considered as well. The data concerning the number of students and teachers from universities in Romania were extracted from the information provided by the National Institute of Statistics of Romania, on their official website. These were centralized, following the indicators aforementioned. Several tables were used for the centralization of this inform, and they were filled out with the annual data available from the Romanian National Institute of Statistics.

In order to achieve the aims of the proposed study and to determine the evolution of the number of bachelor’s degree programmes in Romania, the following indicators were taken into account: the number of existing programmes in institutions of higher education in Romania according to the form of studies (full-time or part-time), the teaching language, and the number of universities accredited or temporarily authorized to function under the relevant legislation.

The data on the number of degree programmes accredited / temporarily authorized to function has been extracted from the decisions issued by the Romanian Government. According to the Romanian legislation, institutions providing higher education have the right to organize exclusively only those study programmes mentioned in the Governmental Decision adopted in the year when enrollment in university takes place. Therefore, we centralized the number of study programmes existing in each Governmental Decision corresponding to each academic year, following the indicators aforementioned.

Thereby, to realize this article, most of the information was extracted from Governmental decisions from various periods of time, subsequent amendments, and the official website of the National Institute of Statistics of Romania.

3. RESULTS

3.1 Evolution of the number of bachelor study programmes offered by Romanian universities, during 2000-2012

In 2012, in Romania there were only 109 institutions providing bachelor higher education courses, accredited or temporarily authorized to function by the Romanian Agency for Quality Assurance in Higher Education in Romania, while in 2000 there were 132 institutions.

During the reference period of this study, the number of Romanian universities has declined by approximately 17.4%. The main cause of this declined is caused, mainly, by the decrease of the number of private universities. Thus, in 2000 there were 57 public universities and 75 private universities, while in 2012, there were 55 public universities and 54 private universities.

However, although the number of higher education institutions has declined in these two periods, the number of full-time bachelor’s degree programmes at national level, has increased by nearly 25%. The most important increase regarding the number of study programmes was registered by private higher education institutions. In 2012, the number of bachelor’s study programmes accredited or temporarily authorized to function and to deliver full-time courses, organized in private universities, has increased by about 43% than the number of study programmes in 2000. Comparing the two periods, it is revealed that in 7 public universities in Romania, the number of study
programmes accredited or temporarily authorized to function has increased by 50%, while 9 private universities had the right to organize 50% more study programmes in 2012 in comparison to 2000. As it can be seen in Fig. 1, the transition from the type of education outlined in the Law no. 84/1995 to the type of education outlined in the Law no. 288/2004 produced no significant changes in the number of degree programmes offered by Romanian universities. Thus, in 2004 (the last year when the study programmes were organized according to pre-Bologna system) approximately 2,350 full-time study programmes have been accredited in Romanian university, with long or short period of study. In 2005, approximately 2,200 full-time study programmes were accredited / temporarily authorized to function, and a decline by about 6% was registered. In 2004, the percentage of short term study programmes in Romanian universities was approximately 20%. Therefore, we can deduce that most of them have become bachelor’s degree study programmes - cycle I.

![Figure 1 Evolution of the number of full-time study programmes accredited / temporarily authorized to function in Romanian universities, during 2000-2012](image)

Made by the author. Source: Decisions issued by the Government of Romania during 2000-2012

In addition to the full-time study programmes that higher education institutions have the right to organize, they were allowed, by the national legislation, to organize part-time bachelor’s degree programmes. In the case of part-time study programmes, an increase by nearly 81% was registered in 2012 compared to 2000. Unlike the full-time study programmes, the largest increase in the number of part-time programmes can be found in public universities, which in 2012 have accredited / temporarily authorized to function more part-time study programmes, by nearly 250%, than in 2000. Compared to 2000, private universities registered, in 2012, a decrease of nearly 13% in the number of part-time programmes accredited / temporarily authorized to function.

A great difference between the evolution of the number of part-time study programmes during 2000-2012, in public or private universities, can be due to the fact that the number of public universities that have accredited / temporarily authorized to function study programmes in the aforementioned forms has increased by approximately 113% in 2012 compared to 2000, while the number of private universities that have accredited study programmes of the same type decreased by nearly 60% in the same period.
Another important aspect in the analysis of developing bachelor’s degree programmes in the reference period, namely 2000-2012, is the number of study programmes delivered in major international languages. Thus, in 2012, a growth of over 200% was recorded with regards to the number of bachelor’s degree programmes accredited / temporarily authorized to function in higher education institutions in Romania. The largest increase is found among private universities, which in 2000 did not organize bachelor’s degree programmes in major international languages. In turn, in public universities, the 2012a 196% increase was registered, in comparison to 2000. Thus, the share of the number of study programmes accredited / temporarily authorized to function in major international languages, out of all study programmes accredited / temporarily authorized to function in Romanian universities, is higher at the end of the reference period than at the beginning. In 2012, nearly 5% of all bachelor’s degree programmes were accredited / temporarily authorized to function, and to deliver programmes in major international languages, compared to nearly 2% in 2000.

Regarding the number of institutions that are accredited / temporarily authorized to function, and to organize bachelor’s degree programmes in major international languages, we found that their number has increased by 40% in 2012 compared to 2000, whilst the number of public higher education institutions has increased by 50% in 2012 compared to 2000.
3.2 Evolution of the number of students at bachelor study programmes offered by Romanian universities, during 2000-2012

As it can be seen in Fig. 4, the number of students enrolled in bachelor’s degree studies did not register a significant increase in the two reference periods – 2000-2012. There was an increase in the number of students only by 1.26% in the academic year 2011/2012 versus the academic year 2000/2001. Regarding bachelor’s programmes (long-term or cycle I - Bachelor's degree) we observe that from 2000-2001 to 2007-2008 there is a significant increase in the number of students, from 484,072 students to 905,868 students. However, in the next period the number declines to 539,852 students. Reorganization of the higher education system, in the form of three study cycles, and elimination of short university education, has led to a decrease in the number of students enrolled in these programmes, from 49,080 in the academic year 2000/2001 to 0, in the academic year 2011/2012.

As shown in Fig. 5, the number of students enrolled in Romanian universities per 10,000 inhabitants, increased in the 2000/2001 - 2007/2008 periods, from 238 students / 10,000 inhabitants to 421 students / 10,000 inhabitants. In the next period, the number decreased comparing to the one recorded at the beginning of the reference period, namely 253 students / 10,000 inhabitants.
Since we cannot talk about the number of students enrolled at university without considering their teachers, who are providing the necessary information to gain more knowledge, an analysis of the number of teachers in higher education and the teacher ratio/student must be considered as well. As it can be seen in Fig. 6, the number of teachers in universities in Romania has registered an increase by 1.45%, which is not significant. During 2001/2002 - 2005/2006 we witness a growth in the number of teachers, from 27,959 to 31,543. During 2006/2007 and 2008/2009 a new increase in the number of teachers was recorded, namely from 30,583 in 2006/2007 to 31,973 in 2008/2009. From 2009/2010 until 2011/2012 we can notice a significant decrease in the number of teachers in the higher education system, from 31,103 to 28,365, close to the numbers registered in 2001/2002.

![Figure 6 Evolution of the number of teachers in Romanian universities, during 2000/2001 - 2011/2012](image)

Made by the author, Source: Romanian National Institute of Statistics

In Fig. 7, we observe that the number of students/teacher is equal in both periods of reference, namely 19 students/teacher. However, from the academic year 2000/2001 to 2008/2009, there is an increase in the number of students/teacher, by almost 47%, from 19 to 28. Nevertheless, from 2008/2009, the number of students/teacher decreases comparing to the values recorded in the base year of the reference period.

![Figure 7 Evolution of the number of students / teacher in higher education institutions during 2000/2001 - 2011/2012](image)

Made by the author, Source: Romanian National Institute of Statistics
According to the statistics published by the Romanian National Institute of Statistics (INS), the highest growth rate of the number of students was registered in the universities from the biggest and most important cities in Romania. Thus, during academic years 2000/2001 – 2007/2008 and 2010/2011 and 2011/2012, the largest number of students enrolled at university was recorded in Bucharest, Iasi and Cluj. In the academic years 2008/2009 and 2009/2010, the situation of students enrolled in major universities has changed, the Iasi city dropped out from the top cities with a high number of students, being replaced by Brasov city. The distribution of the smallest number of students, by towns, is somehow uneven during the reporting period, and it is recorded in the following towns: Margita, Vatra, Aiud, Targu Secuiesc, Toplita, Faget, Amara, Crevedia, Geoagiu, Reghin, Sighisoara, Medias and Roman.

Figure 8 Evolution of the number of students in towns that have experienced the largest number of students, during 2000/2001 - 2011/2012
Made by the author, Source: Romanian National Institute of Statistics

Regarding the number of students enrolled at Romanian universities, in bachelor’s study programmes in the reporting period, we can see in Fig. 9, that the difference between the number of students enrolled in education with full-time presence in campus and those with less frequency in campus, is significant. Thus, in the academic year 2011/2012 versus the 2000/2001, the number of students enrolled in full-time education has increased by nearly 3% and the number of students enrolled in part-time programmes declined by about 6.5%. Data provided by INS shows that, overall, in the academic year 2011/2012 a total of 539,852 students were enrolled compared to 533,152 students in the academic year 2000/2001.

Figure 9 Evolution of the number of students enrolled in universities in Romania, during 2000/2001 – 2011/2012, depending on the type of education
Made by the author, Source: Romanian National Institute of Statistics
Another aspect that can be taken into consideration regarding the distribution of students in the reference period is the number of foreign students enrolled in higher education institutions in Romania. In the academic year 2000/2001 the number of foreign students was 11,669 and in 2004-2005 there were 8,935 students, so that a drop of approximately 23.42% students was recorded. In the next period, from 2004-2005 compared to 2011-2012, the Bologna system was introduced, and an increase of approximately 93.4% of foreign students has been registered. Thus, in the two reference periods, we see that the number of foreign students enrolled at universities in Romania increased by more than 48%, which has had an impact on the number of bachelor programmes delivered in an international language.

4. CONCLUSIONS

As shown in the previous paragraphs, the existing legislative framework in Romania allows universities to determine which management strategies and study programmes will be offered to potential students so that they correspond to the market requirements and the demands of future students. Next paragraphs will present the conclusions regarding the way in which the number of study programmes offered by public or private universities has influenced the number of students. One aspect that should be considered is the way how state and private universities have diversified their educational offer. Although the number of private universities has decreased by approximately 28%, the number of degree programmes offered by them has increased by approximately 25%. During the same period of time, the number of study programmes offered by public universities increased by 32%, while the number of public universities has decreased by 3.5%. Therefore, we note that private universities have put more emphasis on diversification of their educational offer than public universities did. Despite this, from what has been presented in this paper, it can be concluded that the increasing the number of study programmes has not led to an increase in the number of students.

Even though the number of study programmes, both full-time and part-time programmes, offered by universities in Romania during 2000-2012 has increased by 30%, the number of students enrolled in the same period increased only by about 1.25%. This insignificant increase can be attributed to the decline in birth rates that was recorded in Romania, the economic and financial situation, and the fact that some of the study programmes offered by Romanian universities should be aware of an updated curriculum so that students’ demands can be met.

By analyzing the forms of education, the evolution of the number of students and the number of study programmes, we observe that, although the number of full-time study programmes has increased by about 25%, the number of students enrolled in this form of education has increased
only about 3%. For part-time study programmes, we find that the difference between the evolution of their number and the number of students is significant. The number of part-time study programmes has increased in 2012 compared to 2000 by nearly 80%, while the number of students has decreased by almost 6.5%. The number of part-time study programmes offered by private universities has declined by 13%, while the number of the same type of programmes offered by public universities has increased by almost 256%. Therefore, we can say that public universities should review their educational offer to be in line with market requirements.

This article also analyses the development of the number of study programmes held in major international languages and also the number of foreign students enrolled at Romanian universities. The analysis performed revealed that the introduction of the Bologna system was favorable to attract foreign students, and their number has increased by 48%. We can assert that this rise was influenced by the increase of the number of study programmes delivered in major international languages. This increase had an impact on public universities, which like private universities, offered in 2010 their first courses delivered in major international languages. Hence, the number of foreign students has increased by 196%. Thus, implementing the Bologna system and adhering to the European Union constituted a favorable environment to attract foreign students.

As it can be seen from Table 1 and from the information presented in this article, the increase in the number of bachelor’s study programmes is not directly proportional to the number of students and teachers. Thus, during this period of time, the number of study programmes has increased by more than 25% but the number of students and teachers showed a slight increase by nearly 1.5%.

It appears that the number of students and teachers grows or shrinks in the same period, while the number of study programmes does not record significant declines. During 2000-2007, there was an increase in the number of students and along with it, an increase in the number of teachers. This occurs when the number of study programmes decreases. However, since 2007, when the educational offer of Romanian universities has started being more diverse by increasing the number of programmes offered, there has been a decrease in both the number of students and the number of teachers. During the academic year 2011/2012, in comparison to the academic year 2011/2012, the number of study programmes is higher by approximately 34%, whilst the number of students and teachers falls almost to the values recorded in 2000/2001.

From Table 1, it can be concluded that although the number of students and teachers has increased or decreased in the same period of time, the number of students / teacher increased in 2000-2008, then a new value was recorded, the same with the one recorded in 2000.

<table>
<thead>
<tr>
<th>Academic year</th>
<th>Approximate number of study programmes</th>
<th>Students</th>
<th>Teachers</th>
<th>Students/Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000/2001</td>
<td>2,225</td>
<td>533,152</td>
<td>27,959</td>
<td>19</td>
</tr>
<tr>
<td>2001/2002</td>
<td>2,225</td>
<td>582,221</td>
<td>28,674</td>
<td>20</td>
</tr>
<tr>
<td>2002/2003</td>
<td>2,218</td>
<td>596,297</td>
<td>29,619</td>
<td>20</td>
</tr>
<tr>
<td>2003/2004</td>
<td>2,505</td>
<td>620,785</td>
<td>30,137</td>
<td>21</td>
</tr>
<tr>
<td>2004/2005</td>
<td>2,712</td>
<td>650,335</td>
<td>30,857</td>
<td>21</td>
</tr>
<tr>
<td>2005/2006</td>
<td>2,599</td>
<td>716,464</td>
<td>31,543</td>
<td>23</td>
</tr>
<tr>
<td>2006/2007</td>
<td>2,599</td>
<td>785,506</td>
<td>30,583</td>
<td>26</td>
</tr>
<tr>
<td>2007/2008</td>
<td>2,599</td>
<td>907,353</td>
<td>31,964</td>
<td>28</td>
</tr>
<tr>
<td>2008/2009</td>
<td>2,690</td>
<td>891,098</td>
<td>31,973</td>
<td>28</td>
</tr>
<tr>
<td>2009/2010</td>
<td>2,735</td>
<td>775,319</td>
<td>31,103</td>
<td>25</td>
</tr>
<tr>
<td>2010/2011</td>
<td>2,970</td>
<td>673,001</td>
<td>29,746</td>
<td>23</td>
</tr>
<tr>
<td>2011/2012</td>
<td>2,995</td>
<td>539,852</td>
<td>28,365</td>
<td>19</td>
</tr>
</tbody>
</table>

Hence, we deduce that by introducing a greater number of study programmes, universities have not registered a greater number of students. It must be noted that the number of students increases or decreases with the number of teachers. It is clear that these two parameters influence each other. Thus, increasing the number of students requires increasing the number of teachers, who provide specific services in higher education. Moreover, increasing the number of teachers influences the increase of students by providing quality services, promoting the concept of student-centered university.
Therefore, we may consider that in order to attract more students, in addition to providing study programmes that are in line with the market demands, universities should attract teachers and encourage them and allow them to focus on preparing students and increase the quality of their work.

In conclusion, Romanian universities should pay close attention to the market requirements regarding higher education system and develop innovative study programmes that should take into consideration the future trends. They will have to focus more on the quality of study programmes offered and less on their number and also, on the number of teachers and the quality of their work.

ACKNOWLEDGMENT

This paper was co-financed by the European Social Fund through Sectorial the Operational Program Human Resources Development 2007-2013, project number POSDRU/159/1.5/S/142115 „Performance and excellence in doctoral and postdoctoral research in the Romanian economics field”.

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Romanian Government: Government decision no. 707/2012, approving the nomenclature of fields and the specialization / bachelor’s study programmes, the structure of higher education institutions, areas and study programmes accredited or authorized to function temporarily, geographical locations of delivering, the number of transferable study credits for each program university, education or language of instruction, and the maximum number of students that can be enrolled in the academic year 2012-2013.


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