

QUALITY EDUCATION, INITIATIVE AND ENTREPRENEURIAL EMPOWERMENT FOR SUSTAINABLE ECONOMIC DEVELOPMENT

Raluca Corina DAWED^{a}, Lavinia-Ştefania ȚOȚAN^b*

^{a, b} Bucharest University of Economic Studies, Romania

ABSTRACT

This paper aims to highlight the role of quality of education through the one of the system outcomes, skilled and autonomous individuals capable to reveal and fulfil their potential and equipped with one of key competency for long life learning - entrepreneurship (according with European Commission recommendation, 2018). Hence the assessment of Romanian educational system it was considered based on public spending on education, percent on GDP as an input indicator and youth literacy rate, ages 15 – 24 and tertiary school enrolment, percent of all eligible children as output indicator. The entrepreneurial initiative was assessed by considering the total number of enterprises active in the economy, respective the rate of creation for new enterprises. We will realize a multiple econometric model between public spending on education, percent on GDP as an input indicator and youth literacy rate, ages between 15 – 24 and tertiary school enrolment, percent of all eligible children.

KEYWORDS *economic development, entrepreneurship, quality education, key competencies, sustainability.*

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1. INTRODUCTION

The assessment of the quality of an educational system requires a holistic approach in terms of system inputs like resource allocation but also in terms of system outputs, both short and long term. It also requires a comprehensive evaluation of core educational programs, capacity of collaboration with other systems or networking and overall, the hole ecosystem that supports future graduates for achieving their full potential.

The aim of this article is the examination and assessment of Romanian educational system by an approach that emphasis the way that system graduates integrate key competences in real life, in this case entrepreneurship, as an opportunity or professional option and literacy, based on the way that competencies are evaluated, not only regarding explicit or implicit evaluation of a pertaining school subject, but mainly on knowledge evaluation (Gordon et al., 2009). Even that the total entrepreneurial activity it was mainly assessed by focusing on economic determinants, the differences between countries, from this point of view, not lies only on those, but also on cultural end education factors (Uhlaner & Thurik, 2007). A source of originality of this article may consist into an integrative approach, considering quantitative aspects like schooling span (in this case tertiary level of education) and entrepreneurial initiative (expressed in number of active companies) with some qualitative aspects like system quality and beneficiary competency evaluation (in this case youth literacy rate aged between 15 – 24).

Regarding the key competencies for lifelong learning, entrepreneurship is one of the eight that European Commission recommended (European Commission. Directorate General for Education,

* Corresponding author. E-mail address: lavinia.totan@csie.ase.ro

Youth, Sport and Culture., 2019). It is a common European goal that all young people should receive the best possible education as they become independent and engaged citizens, capable of finding fulfilling jobs or getting involved in innovation and entrepreneurial activities. Entrepreneurial competences developed during the scholarship (mostly in high school and university) and in lifelong education is one of the main stimuli of entrepreneurial initiative in European countries (Gavurova & Belas, 2021). Literacy competence regards the students' abilities to identify, understand, create and interpret facts and opinions from all sources of information (written, audio, video or digital content), it may be developed in native language and foreign languages and implies the way that people interact and communicate with others, in an effective and creative way (European Commission. Directorate General for Education, Youth, Sport and Culture., 2019).

The constant claim of educational system reforms is, to a certain degree, based on a commonsense acceptance of the fact that for achieving economic success and growth countries may rely on better schools. That underlines that there is a serious need for providing strong empirical evidence about the link between student's curricula or what they learn in school and, subsequently, what happens in a national economy (E. Hanushek et al., 2008).

Higher Education Topic Guide considered that the contribution of educational systems to the economic development can be analysed based on the relationship between the level of education, lifetime earnings and cost of education (Power et al., 2015). The popularity of studies and internships abroad and the existence of several significant cross-country universities rankings confirms a broadly appreciation of the quality of the tertiary education between both experts and common audience (Goczek et al., 2021). In terms of outcomes like entrepreneurial initiative expressed in creating new companies or start-ups, there are studies that underline that tertiary education increases the formal entrepreneurship by enhanced human capital, a lower perceived risk and higher self-confidence (Jiménez et al., 2015). This coming from the endogenous system capacity of creating a learning environment that provides for its beneficiary better capabilities in seize opportunities, creativity and innovative approaches that may also been pursued as system outcomes like higher individual productivity and incomes and entrepreneurial initiative. The positive effect of tertiary education on overall entrepreneurial activity it was also explained by the way that it may provide a larger pool of 'would-be' entrepreneurs attracted by other rewards than income, like greater autonomy or social status and source of human capital for high-tech entrepreneurial initiative (Uhlaner & Thurik, 2007). This seem to be confirmed by a case study referring to Romanian students and the main determinants of their entrepreneurial intentions. It seems that the younger generation is much more aware of the fact that entrepreneurship is a good way of self-realization, for achieving a higher social status and personal fulfilment (Popescu et al., 2016). Even that the impact of education level (specifically tertiary) on birth of new enterprises is not clear cut, universities are not only specialist trainers but also creators of networks and partnerships based on scientific relationships and that contributes, support and nurture innovation and may stimulate students to acquire the competencies that allow them to set start-ups or SME (Apostu et al., 2022).

From the system input point of view, the investments in human capital were widely assessed that there are essential for accumulation of human capital. Even that some of scientific body literature about the relationship between public education expenditure and economic growth is biased or inconclusive, there are empirical evidence and studies that demonstrated the effect of public education expenditure as share of GDP is positive, in developed countries (Awaworyi Churchill et al., 2017). There are combined empirical evidence that points that differences in cognitive skills lead to significant differences in economic growth and by providing a broad base of education (an inclusive or for all system) and pushing a significant number of that base for very high levels of education and achievements have economic payoff (Hanushek & Woessmann, 2012).

2. DATA AND METHODOLOGY

There was taken into consideration some of the main indicators to depict the Romanian educational system, as: the gross enrollment into the system rate, the percentage of the public expenditure of education in GDP, the literacy rate.

From figure 1, we can conclude that the percentage of public expenditure of education in GDP increases from 2.5% in 2012/2013 to 3.2% in 2021/2022. The average of the percentage for the public expenditure on education between 2012/2013 and 2021/2022 was 2.9%.

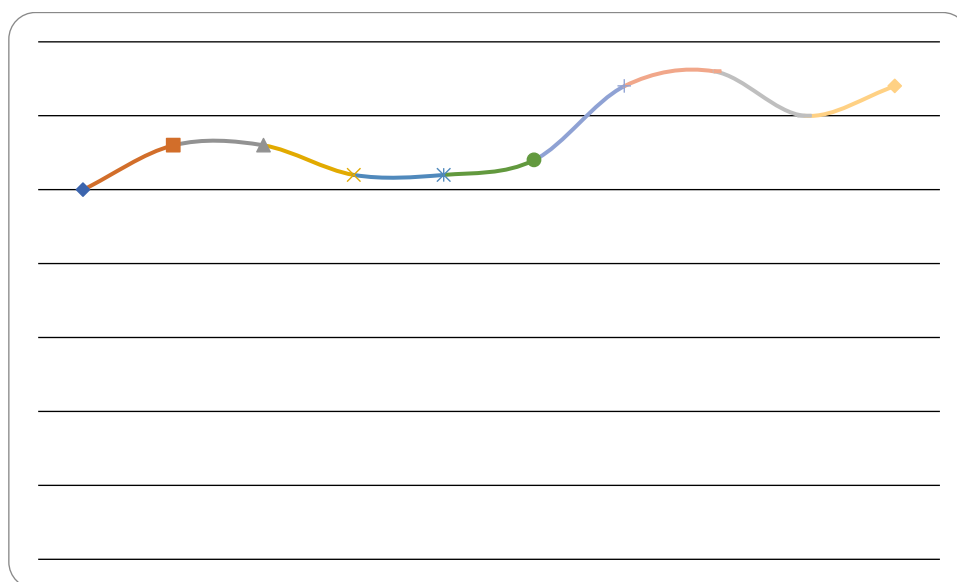


Figure 1. Evolution of percentage for the the public expenditure of education between 2012 and 2021

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 23
 "International Statistics"

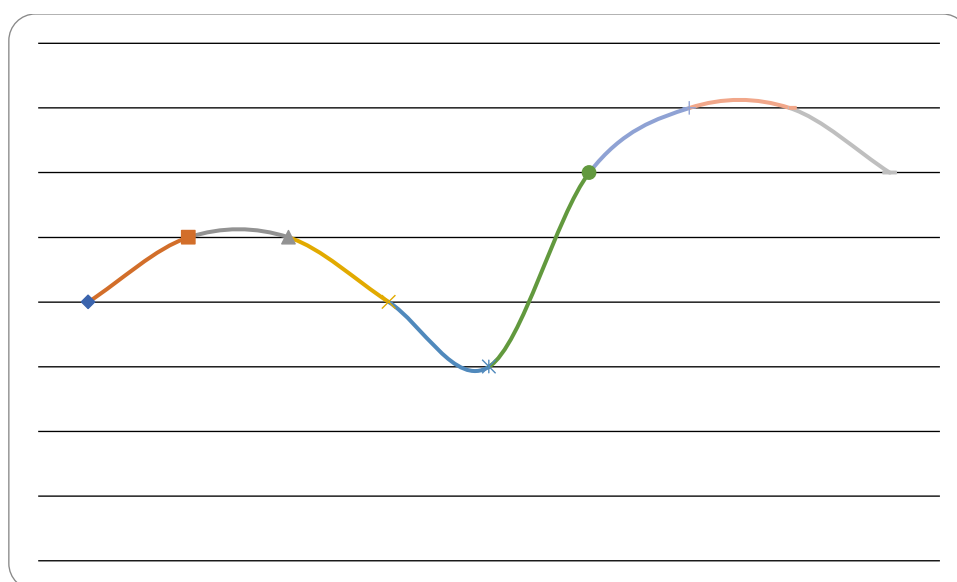


Figure 2. Evolution of the gross enrolment rate in primary education between 2012 and 2020

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 23
 "International Statistics"

Gross enrolment rate in primary education increases from 88% in 2012 to 90% in 2020, as Figure 2 displays. The average of the gross enrolment rate in primary education between 2012 and 2021 is 89%.

The gross enrolment rate in secondary education between 2012 and 2020 decreases from 95% in 2012 to 86% in 2020, from figure 3. The average of the gross enrolment rate in secondary education between 2012 and 2021 is 89%.

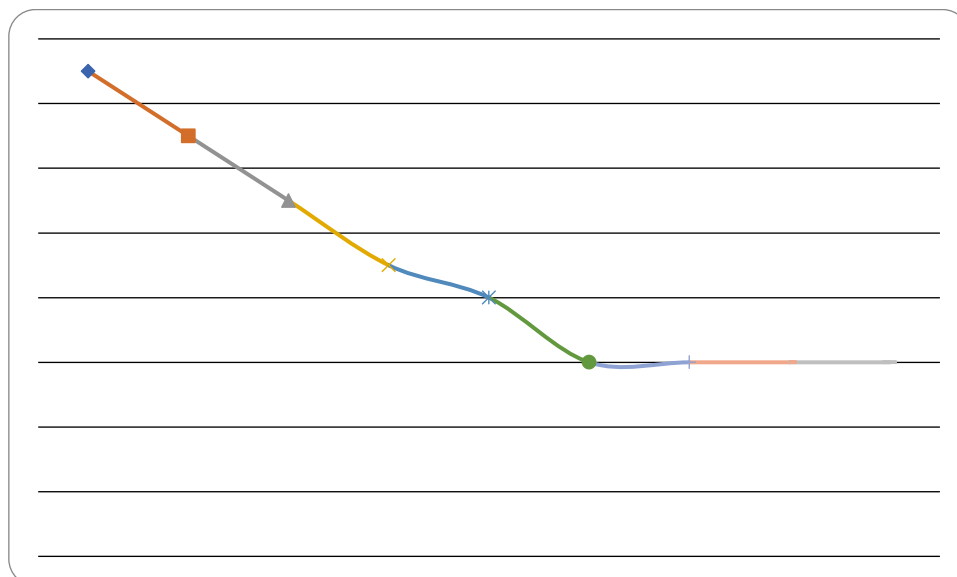


Figure 3. Evolution of the gross enrolment rate in secondary education between 2012 and 2020

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 23
“International Statistics”

The gross enrolment rate in tertiary education between 2012 and 2020 increases from 45% in 2012 to 64% in 2020, figure 4 displays. The average of the gross enrolment rate in tertiary education between 2012 and 2021 is 57%.

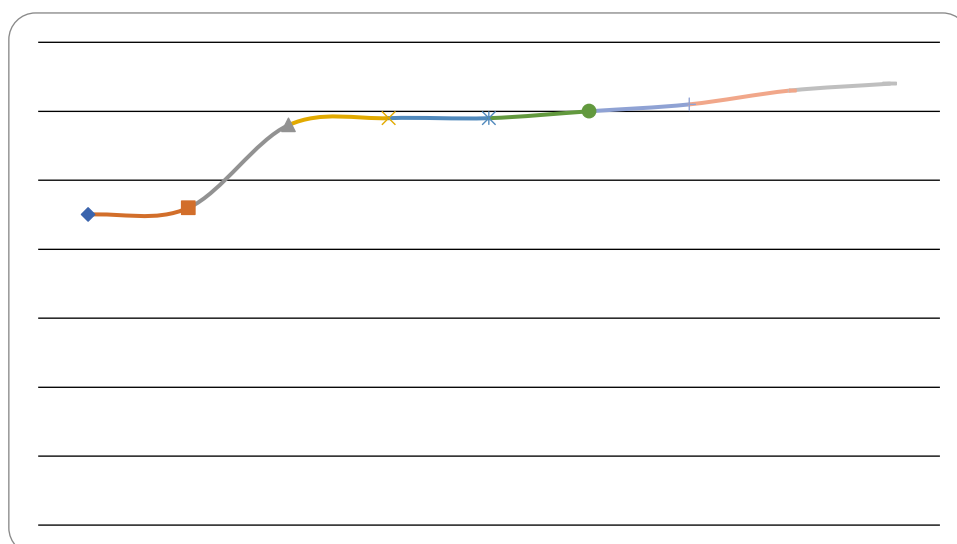


Figure 4. Evolution of the gross enrolment rate in tertiary education between 2012 and 2020

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 23
“International Statistics”

The evolution of the pupils/teacher ratio in primary education between 2012 and 2021 has a constant trendline. In 2012 the value of this ratio was 18%, then it increases at 19% between 2013 and 2021, from figure 5.

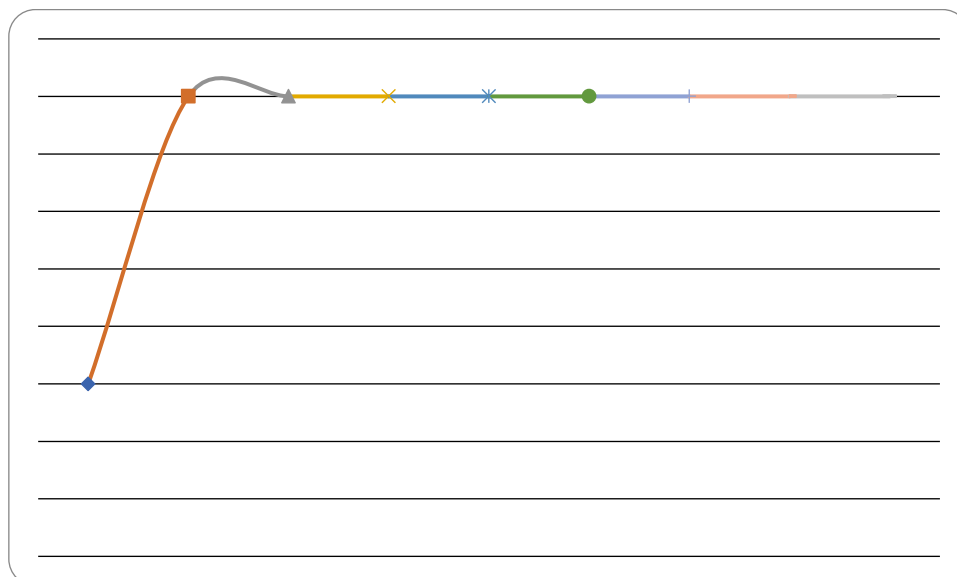


Figure 5. Evolution of the pupils/teacher ratio in primary education between 2012 and 2021

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 23
 "International Statistics"

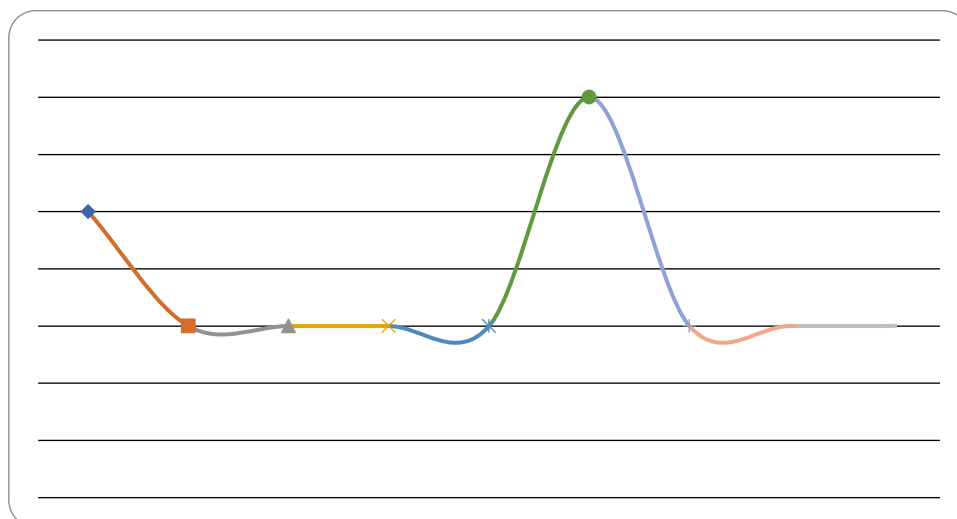


Figure 6. Evolution of the pupils/teacher ratio in secondary education between 2012 and 2021

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 23
 "International Statistics"

The evolution of the pupils/teacher ratio in primary education between 2012 and 2021 decreases from 13% in 2012 to 12% in 2021.

From figure 7, we can conclude that the enrolment rate of the school-age population increases from 66.3% in 1998 to 71.6% in 2021. The average enrolment rate of the school-age population for the time span 1998 and 2021 is 75.7%. Enrolment rate of the school-age population increases from year to year with 0.40%.

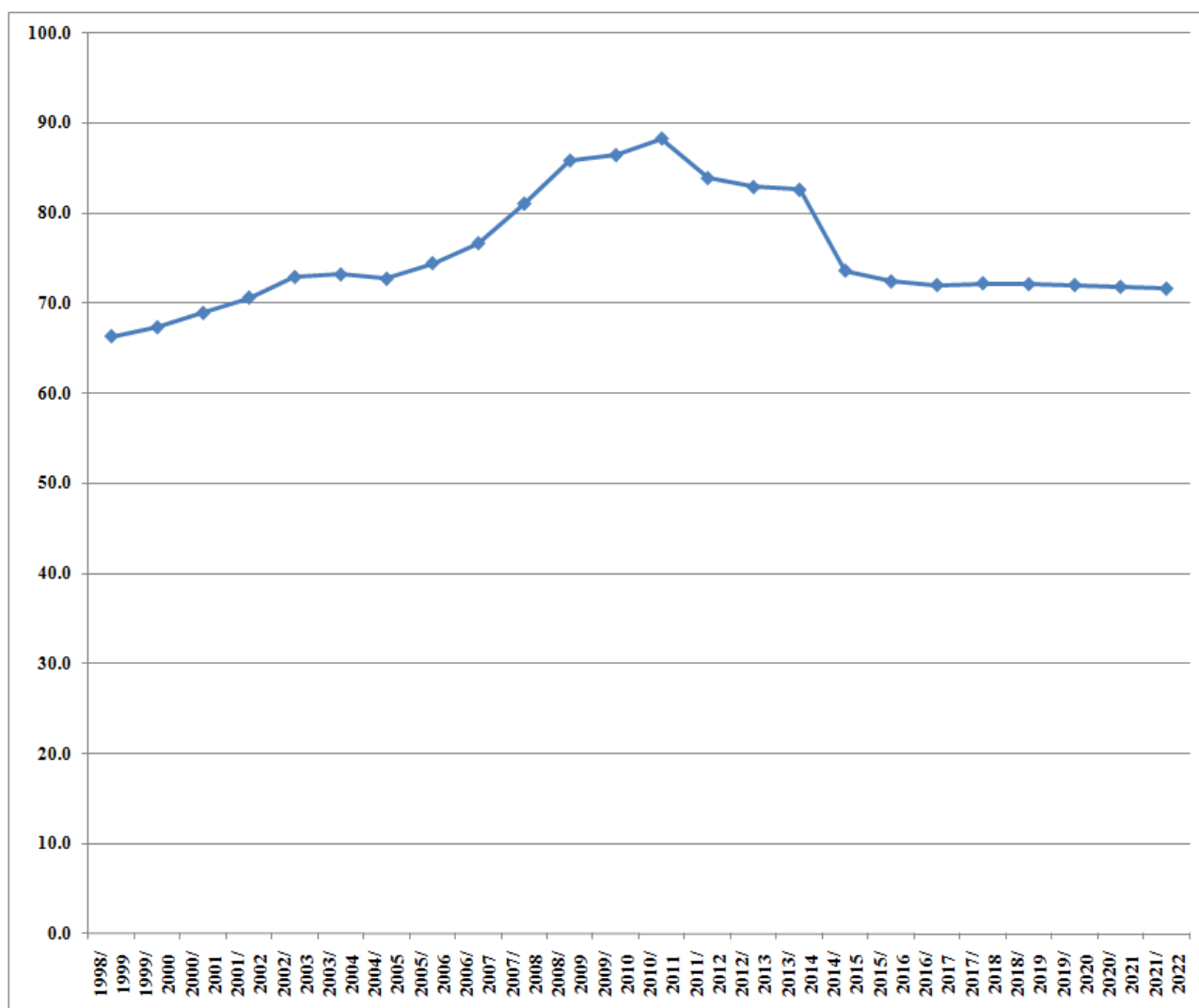


Figure 7. Evolution of the enrolment rate of school-age population between 1998 and 2022

Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 8 "Education"

Total number of active enterprises, between 2000 and 202, increases from 308064 enterprises in 2000 to 624030 enterprises in 2021. The total number of enterprises increases from year to year, in the reference time interval, with 15046 enterprises (3.4%).

From figure 9, we can conclude that the rate of creation for new enterprises increases from 16.5% in 2000 to 29.3% in 2020. The evolution of the literacy rate for young people between 15 and 24 years increases for 93% in 2000 to 97% in 2022.

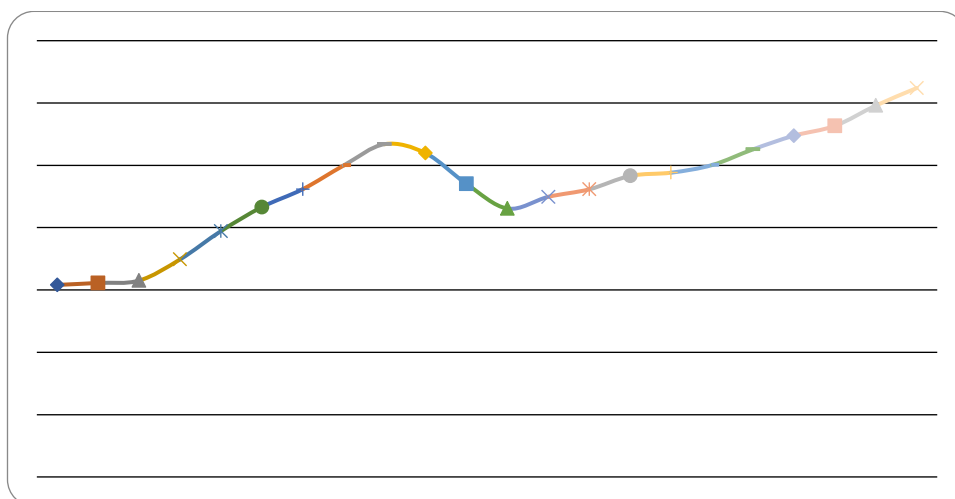


Figure 8. Evolution of the total number of active enterprises between 2000 and 2021
 Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 15 “Activity of enterprises”

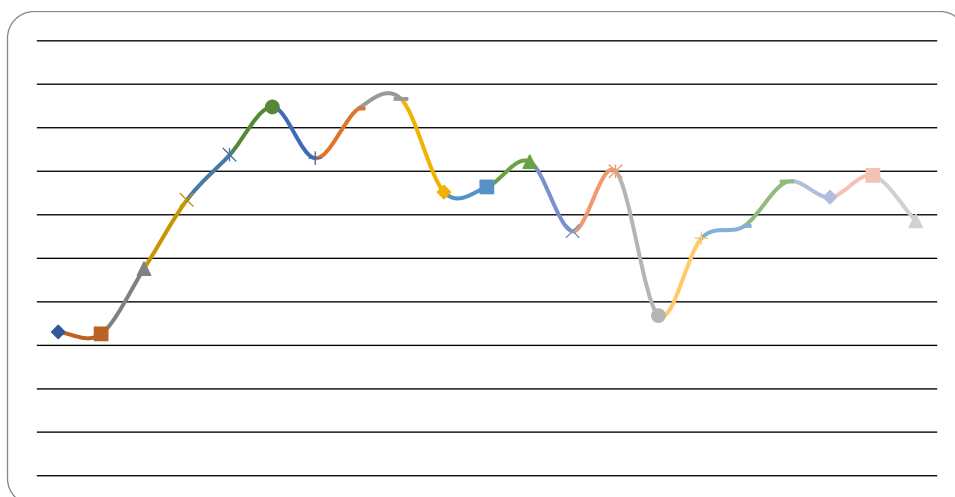


Figure 9. Evolution of creation rate of new enterprises between 2000 and 2020
 Source: National Institute of Statistics, Annual Yearbook 1990-2021, Chapter 15 “Activity of enterprises”, “New enterprises and profile of the entrepreneur in Romania”, 2022.

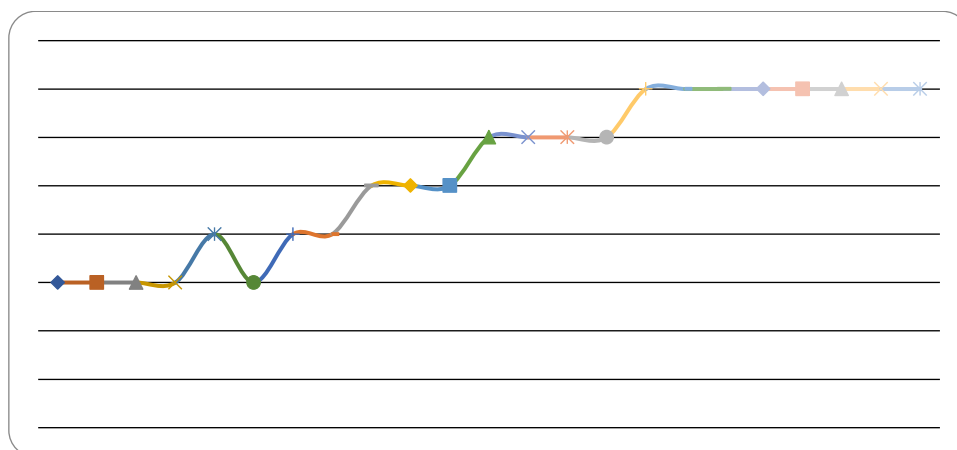


Figure 10. Evolution of the literacy rate for young people (aged between 15 and 24 years)
 Source: World Bank, <https://data.worldbank.org/indicator/SE.ADT.1524.LT.FM.ZS>

3. RESULTS AND DISCUSSIONS

An econometric model was performed, between the literacy rate for young people (aged between 15 and 24), the public expenditure for education as share in GDP, the gross enrolment in the tertiary education and the rate of creation for new enterprises between 2012 and 2020, for Romania. Data referring to rate of creation for new enterprises for 2021 and 2022 are not still yet available, they have not been published yet.

Figure 11 displays the direct and linear relationship between the literacy rate and the rate of creation for new enterprises.

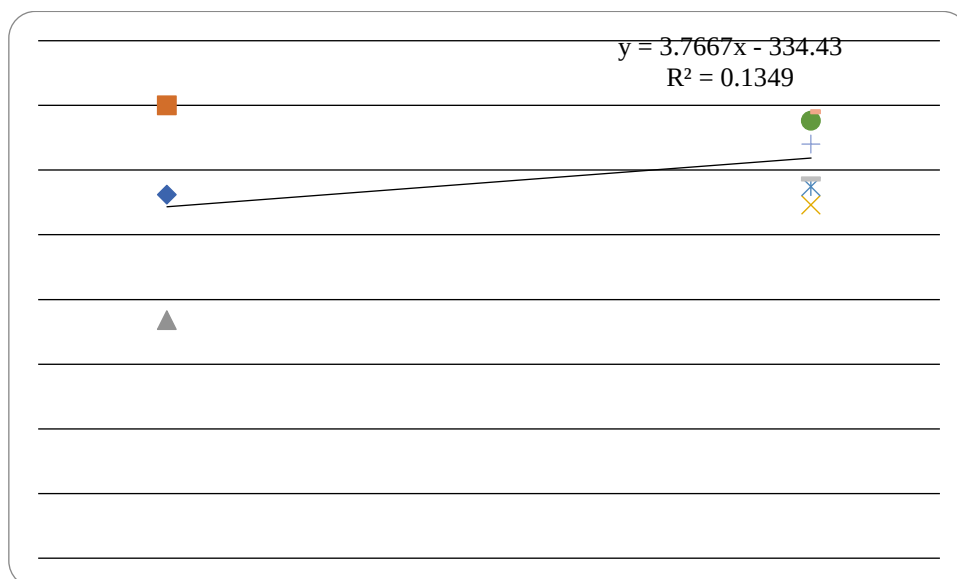


Figure 11. Correlation between literacy rate and the creation rate of new enterprises
 Source: Own calculations

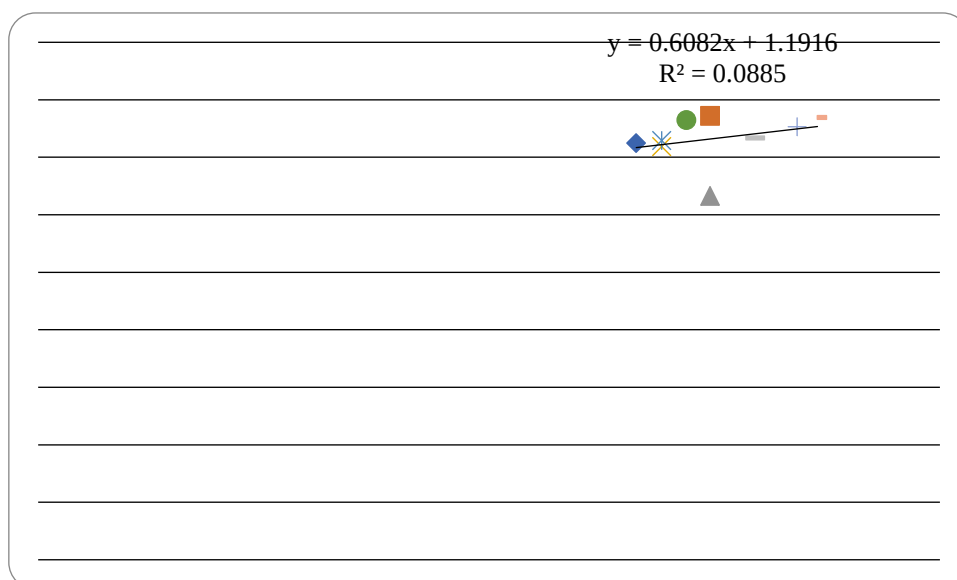


Figure 12. Correlation between the percentage of the public education expenditures in GDP and the creation rate of new enterprises
 Source: Own calculations

Figure 13 displays the direct and linear relationship between the percentage of the public education expenditures in GDP and the rate of creation for new enterprises.

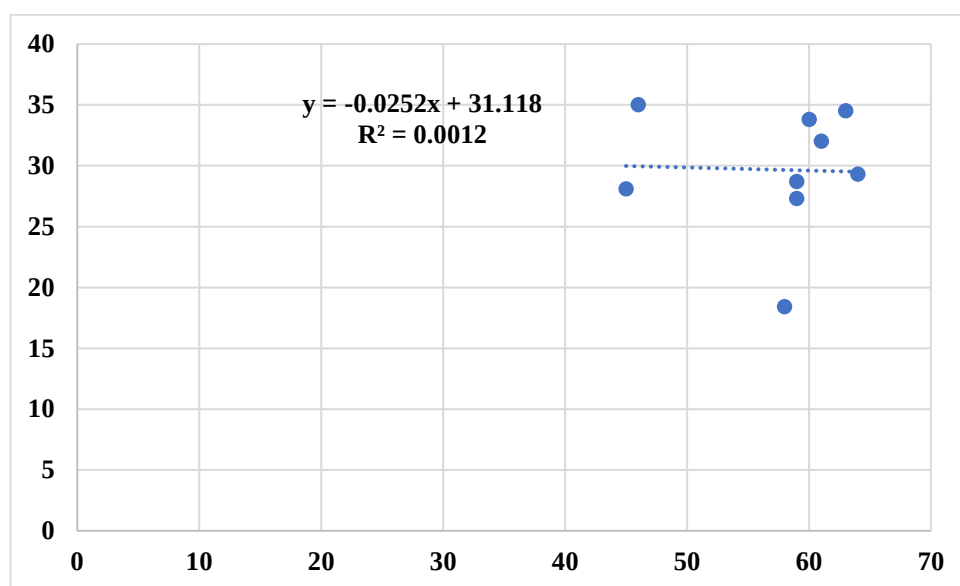


Figure 13. Correlation between gross enrolment rate in tertiary education and the creation rate of new enterprises
 Source: Own calculations

The regression equation is:

*Rate of creation for new enterprises = -1312 + 14.9*Literacy rate for young people (aged between 15 and 24) + 12.89 *The percentage of public expenditures for education in GDP - 1.14*Gross enrolment rate in tertiary education.*

If the literacy rate for young people (aged between 15 and 24) increases with 1%, then the rate of creation for new enterprises increases with 14.9%, if percentage of public expenditures for education in GDP and the gross enrolment rate in tertiary education are constant.

If the percentage of public expenditures for education in GDP increases with 1%, then the rate of creation for new enterprises increases with 12.89%, if literacy rate for young people (aged between 15 and 24) and the gross enrolment rate in tertiary education are constant.

If the gross enrolment rate in tertiary rate increases with 1%, then the rate of creation for new enterprises decreases with 1.14%, if the literacy rate for young people (aged between 15 and 24) and the percentage of public expenditures for education in GDP are constant.

The econometric model is linear and the coefficients are statistically significant. The coefficient of determination is 0.80. The rate of creation for new enterprises is explained, in proportion of 80%, by the performed econometric model.

2. CONCLUSIONS

If state allocates more money for the development of the educational system, the economy develops more. The high level of education and the percentage of GDP allocated for education, created more new business. Universities support students acquisition entrepreneurial skills by that encouraging them to develop their own business.

The percentage of the public expenditures from education remains among the lowest from all the EU countries, especially in terms of the duration of studies in preventing the school early leaving which means a high level of the dropout rate. There is a strong dependence between the development of the entrepreneurial sector, innovation and the economic development of the country. New and expanding businesses are sources of economic growth.

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