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## Article

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Amfiteatru Economic Journal

## Provided in Cooperation with:

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*Suggested Citation:* Dumitrache, Vlad; Raileanu-Szeles, Monica (2014) : The Role of Business Education Provided Through Lifelong Learning in Enhancing Profesional Competencies. Evidence from the EU-27 Dataset, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 16, Iss. 37, pp. 874-884

This Version is available at:

<https://hdl.handle.net/10419/168863>

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# THE ROLE OF BUSINESS EDUCATION PROVIDED THROUGH LIFELONG LEARNING IN ENHANCING PROFESSIONAL COMPETENCIES. EVIDENCE FROM THE EU-27 DATASET

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## Abstract

This paper examines the macroeconomic implications of business education provided by the process of lifelong learning, based on a panel dataset comprising the EU-27 countries. Business education is a valuable component of adult education, and the lifelong learning represents the main channel facilitating the transfer of this knowledge. A number of three panel regression models are conducted separately for the New Member States (NMS) and Old Member States (OMS). The positive effects of business education on economic growth and duration of working life are found to be more significant and powerful in the NMS than in the OMS. The empirical analysis also shows that business education is a determinant of the subjective poverty reduction only in the OMS, while the third-level education attainment contributes to the poverty reduction in the NMS, only when been accompanied by business education.

**Keywords:** business education, lifelong learning, economic growth.

**JEL classification:** M21, I23, I25.

## Introduction

In the contemporary economy, the entrepreneurial activities have become a key part of any powerful and healthy economic system. The competitive market is a prerequisite for successfully acting in the global economy, where each organization has to find a competitive advantage in order to survive over time. In the area of education, one of the most important competitive advantages is provided by business education. Those who are trained in business education will easier integrate in any organization as they are more likely to become successful managers and leaders. Through the process of lifelong learning, education in business allows senior employees to gain the ability to lead in edge-thinking, to achieve high performances, as well as to get middle- to higher positions into the

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company management. Business education also represents an opportunity for individuals and employees to develop themselves and to support the company's development in future.

One of the most important challenges met by all European education systems, but especially by the NMS ones, such as it is the case of Romania, is to match the educational offer and the labor market needs. Business education facilitates the achievement of this match at any age and any stage of career through the lifelong learning. In general, when holding at least basic knowledge in business education, the graduates will better integrate on the labor market. Education in general is considered being a powerful determinant of economic growth and poverty reduction (Higher Education Alliance for the Rock River Region, 2005). In this light, business education generates positive effects for both the individual and the society. However, our matter of interest in this paper is to analyze the impact of business education on the key-economic and social performances in the EU and to examine whether there are differences in this sense between the NMS and OMS.

When referring at the adult population aged 25 and over, the major channel through which business education improves the professional opportunities is the lifelong learning. For this group of population, business education is often referred to as executive and professional education. In the era of information and knowledge driven economy characterized by permanent changes and new challenges, the continuous education should become a priority for all education systems.

Lifelong learning has recently become the main education channel through which business education is provided. Even though business education is a field of study since the 1950s (meaning that it cannot be considered as a new discipline), at present the education system is not fully compatible with the labor market characteristics, being not able to cover the labor market needs. This is first because the theoretical approaches still dominate the universities curricula especially in the NMS, and the business education is insufficiently promoted. Also, it is almost impossible to accurately predict the job market, which tends to continuously shift over. If the educational process ends before the graduates' entering the labor market, then the education system fails in matching the labor demand and supply, because they are in permanent change, as imposed by a changing global economy. The concept of lifelong learning therefore comes as a solution for those who are in need of education, once the standard education process is over. For those in search of a new job, or simply in search of a job which requires knowledge and know-how beyond their own qualification, lifelong learning becomes a key element. Through the process of lifelong learning the individuals can continue to study and learn throughout their lives, in order to permanently adapt to the changing job market. The paper is structured as follows. The introduction shortly describes the research issue and addresses the research questions. The first chapter is the literature review and is followed in the second chapter by the presentation of methodology and data. The third section is the empirical research and the fourth section advances policy recommendations and concludes.

### **1. Conceptual framework and literature review**

Although it is subject of intense development and promotion in the present, business education has a long history behind (Wilson, 1947). It is thought to have appeared for the first time in 1635, when the Plymouth Colony hired a teacher for reading, writing and casting accounts. In the 18<sup>th</sup> century, commerce and trade was being thought in private

Universities. During the following centuries, business education has shifted from being thought not only in private schools and universities, but also in public institutions as well.

The development of business education is not similar in the world. In the US, business education has a strong traditional dimension, while in the EU it was only recently developed and extensively used. In the US business education initially developed in secondary schools as to train officials in different areas of activity. In later years, business education has preeminently become a training course about economic issues that are not regularly thought in the schools and universities curricula. In 1963, during the Kennedy administration, the United States adopted the Vocational Education Act, which is the first legislation making reference at business education in an official manner. In 1983, under the Reagan administration, the NBEA standards (Standards for National Business Education Association) were established for Teacher Excellence. Over the last decades, both in Europe and the United States, several laws have been passed to help at the developing of vocational education. Their objective was to support and stimulate the graduates having economic and business studies when entering the labor market.

While in the United States business education has been a priority for all governments, Europe has started to encourage the development of business education only after the creation of the EU. At the EU level, the ECBE (European Council for Business Education) has been designed to legislate business education. This institution, which is an international not-for-profit educational organization, has as main objective the support of academic and professional learning institutes in business and related fields. As shown in its own statement, the objective of the ECBE is to *provide advice and consulting services to encourage and support institutions to commit themselves to continuous improvement by engaging in its accreditation process*. It also *„creates valuable networking opportunities for schools interested in internationalising their curriculum and contacts* (European Council for Business Education, 201-). The ECBE enhances both career opportunities and the European learning environment for pupils, students and individuals searching for a career in business. The dynamic global economy, of which Europe is a part of, is considered the perfect opportunity for the ECBE to help European students developing skills, knowledge and experience. At the European Business Institutions students can follow professional and academic programmes supporting them to fully commit to the perspective of lifelong learning.

Lifelong learning means a voluntary pursuit of knowledge for either personal or professional reasons. In terms of the ECBE projects, lifelong learning also meant the “lifelong learning project” developed between 2007 and 2013 with a draw of a 7 billion euro budget. Lifelong learning is now a hot topic in the European education and it has been a growing subject of interest in both the EU and US. To further understand the development of this concept we shortly present some statistics about the dynamics of lifelong learning in the world.

Although it is widely recognized as an important part of any education system generating benefits for both economic development and social inclusion, the lifelong learning has managed to become a subject of increasing importance only in the last ten years. Jenkins (Jenkins, et al., 2002) analyze the development of lifelong learning in Europe and the North America in the last two decades. Quoting Field (2000), it appears that in Europe for example, lifelong learning has expanded in Finland by 28% from 1972 to 1995, and in the Netherlands by 38% from the 1960’s to the 1990’s. Outside Europe, in Canada the lifelong

learning has increased by 38% in the 1990's, after a remarkable growth of 20% in the 1980's. In the United States the increase of lifelong learning was 46% in the 1990's.

As an integrated part of business education, and as a step forward after the higher education, the lifelong learning has become a structural part of the institutional education. The existence of the European Union's project "Lifelong Learning Programme" proves the relationship between business education and lifelong learning. Conceived as a project aimed to develop education and training not just across the European Union, but also within the Europe, the Lifelong Learning Programme has the crucial role of stimulating people to access learning experiences at any stage of their life.

Being an integrated part of the European Education, just like the Erasmus or Comenius programmes which are destined for earlier ages, the lifelong learning was encouraged by the European Commission through the Grundtvig Programme. This program was launched in the year 2000, with the aim to provide adults the opportunity to gain and perfect their knowledge and skills.

Lifelong learning is therefore an important part of the European education, which contributes not only to economic growth but also to the decrease of social inequalities between and within countries (Cohn and Addison, 1998). Investing in human capital has a key role in promoting the sustainable and smart economic development in the long term. The lifelong learning can be seen as being the bridge that ensures the perfect transition from basic education to employment (Brennan, et al., 2000; Nikhil and Pramanik, 2011). Since unemployment is one of the most prevalent symptoms of any crisis, the lifelong learning could also be a solution for the ongoing economic crisis as well as for any other economic crisis in future.

At the EU level, the EU 2020 Strategy highlights the importance of education in developing the entrepreneurial and innovative capabilities. In this framework the entrepreneurship is viewed as one of the eight key competencies for lifelong learning, being a pre-condition for employability and professional achievement in a knowledge-based society.

To understand the importance of business education and of its main learning channel which is the lifelong learning, the impact of education on economic growth should be first examined.

The capital investment has always been an important factor of economic growth. The impact of the workers migration on economic growth has been initially studied by Schultz (1961), while the relationship between education and return earnings is analyzed later by Gary Becker (1975). In a knowledge economy, education is found to be a determinant factor for the technological progress, so that by education and especially by the higher education, lesser developed countries can catch up with more technologically developed countries (Bloom, et al., 2005). A rich strand of literature examines the impact of education on economic growth (e.g. Steavens and Weale, 2004) and economic development (Lin, 2004), and generally find positive effects. In their paper Goldin and Katz (2011) finds that the educational attainment among Americans from 1915 to 1999 accounts for 10 percent of the economic growth over that period of time.

Business education allows graduates developing their entrepreneurial skills, and therefore prepares them to better integrate on the labor market. The growing importance of business

education is also reflected in the increase in business major in Universities Worldwide and especially those in the United States (Korn, 2012).

In present business services are identified as one of the most demanded services, having a high growth compared to other services, such as the healthcare and social services (Higher Education Alliance for the Rock River Region, 2005). It is therefore concluded that at the regional level, raising the skills of graduates by business education is a necessary step to satisfy the labor market demand (Aldridge and Tuckett, 2001).

The entrepreneurship programs represent an important component of higher education. The European Commission (2012) underlines their importance of this type of educational programmes in stimulating employment. This study shows that 16% of the entrepreneurship alumni is currently self-employed, whereas 71% is in paid employment. As also mentioned in this analysis, *“one of the characteristics of an individual’s employability is the extent to which an individual is capable of finding his or her first job”*. As presented in the analysis more than 50% of the entrepreneurship alumni start their first period of employment directly after their graduation. The study therefore concludes that the higher education, business education and entrepreneurship programs are key parts of economic growth and also of any employment strategy.

## 2. Methodology and data

The main econometric tool used in the empirical section is the panel regression model. This choice allows exploiting the longitudinal dimension of our dataset.

The regression model can be specified as follows:

$$\Delta y_{it} = S'_{it}\alpha + X'_{it}\beta + Y'_{it}\gamma + u_{it} \quad (1)$$

Where  $\Delta y_{it}$  represents the economic growth,  $X$  is the lifelong learning,  $Y$  is a vector of other explicative variables of economic growth, while  $u_{it}$  and  $e_{it}$  are the error terms. Subscript  $i$  denotes country and  $t$  denotes the period of reference.

The estimation method which is selected according to the data requirements is explained in the empirical section. In this sense, the problems of endogeneity, heterokedsticity and serial correlation are initially addressed. The endogeneity problem is addressed in this paper by using the “ $C$  statistic” also called ‘difference-in-Sargan’ statistic and by the Davidson-MacKinnon test. The  $C$  test is defined as the difference of the Hansen-Sargan of the unrestricted equation (with the smaller set of instruments) and restricted equation (with the larger set of instruments), and allows a test of a subset of the orthogonality conditions. The Davidson-MacKinnon test (1993) is a test of exogeneity for a fixed-effect regression estimated via instrumental variables. A rejection of the null indicates that endogenous regressors’ effects on the estimates are meaningful, and instrumental variables techniques are required. The problem of heterokedasticity is tested by the likelihood ratio tests, while the serial correlation by the Wald test, which is adapted upon Wooldridge (2002).

Our data are taken from the Eurostat dataset and cover a number of 27 EU countries and 14 years (from 2000 to 2013). As the focus of our analysis is the impact of business education on the economic and social performances in the EU, the most important variable of our analysis is business education, which is here instrumented by the variable called lifelong

learning. This variable refers to persons aged 25 to 64 (% of population) and come from the EU Labour Force Survey. The reason for choosing this variable to analyze the impact of business education is that most individuals involved in the process of adult education aim enhancing the professional competencies gained and developed over their entire career. The lifelong learning is the most common and broad field for transferring knowledge in the area of business education.

Another variable of interest in our study is the third-level education and refers at the population with tertiary education attainment (% of population), i.e. the first and second stage of tertiary education (levels 5 and 6). Beside these variables of interest, other control variables have been included into the analysis: the unemployment rate, Gini index of social inequality, the initial level of the real GDP per capita (logarithm) and the “at-risk-poverty-rate”.

The impact of business education on the economic and social performances aggregated at national levels is examined by three types of regression models, corresponding to three different dependent variables. The dependent variables in the regression models are the economic growth, the subjective financial poverty and duration of working life. Subjective poverty (which has a financial nature here) is measured by the variable “inability to make ends meet”.

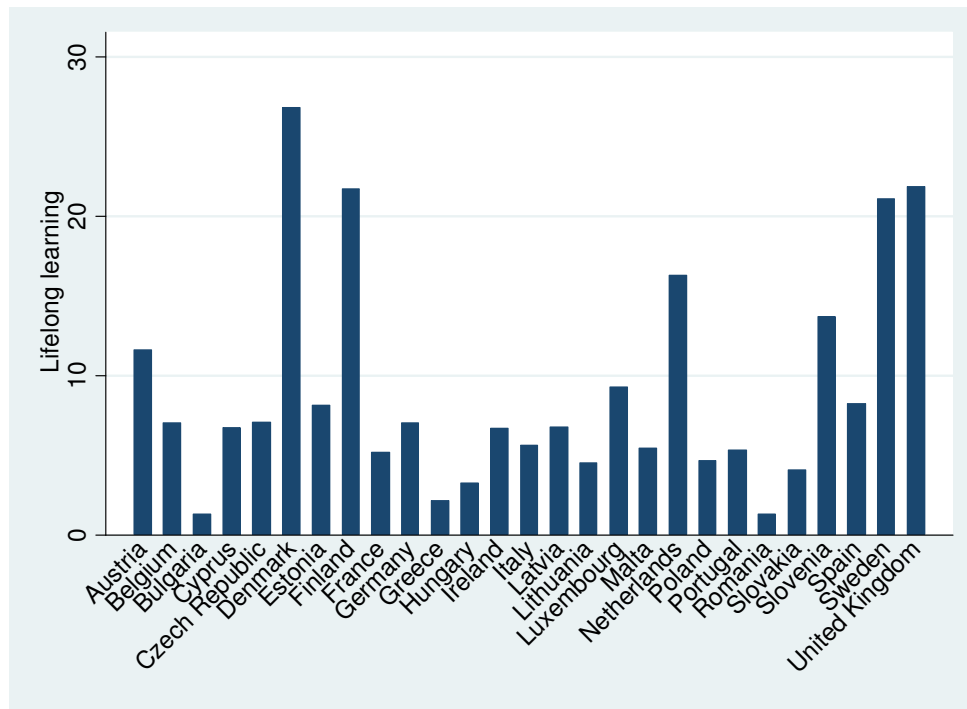
### 3. Empirical analysis

The aim of the empirical section is to analyze the impact that business education has on three measures of economic and social performances aggregated at national level. The analysis is conducted for the EU-27 countries, but at some steps the NMS and OMS are separately examined.

It has been shown in second section of the paper that lifelong learning is the main education channel allowing the transfer of knowledge in the field of business education (European Council for Business Education).

In the first part of the empirical analysis a short descriptive analysis allows better understanding the dynamics of the main variables of interest in the EU-27 area, and in the second part the quantitative analysis gives insights to the role played by business education into achieving high economic and social performances.

Figure nr. 1 below shows the high degree of heterogeneity as regards the average percentage of population involved in the process of lifelong learning within the EU-27 area, from 2000 to 2013. While Denmark, UK, Finland and Sweden are the best performers in lifelong learning, Bulgaria, Romania, Greece and Hungary have the lowest rates of lifelong learning in the group of EU-27 countries. In general lines, the groups of NMS and vulnerable OMS have low levels of lifelong learning. In this analysis, the vulnerable OMS are considered to be the PIIGS countries (Portugal, Ireland, Italy, Greece and Spain) as well as Cyprus and Malta.



**Figure no.1: Average proportions of population involved in lifelong learning from 2000 to 2013 in the EU-27 countries**

*Source: Eurostat data (European Commission, 2013)*

A set of basic descriptive statistics are displayed in table no. 1 for our main variables of interest, i.e. the lifelong learning and tertiary-level education. The statistics indicate a higher difference between the NMS and OMS in the level of average national achievements in the area of lifelong learning than in the area of the tertiary-level education. This finding supports our choice to run separate panel regression models for the NMS and OMS.

**Table no. 1: Descriptive statistics NMS, OMS, 2000-2013**

Indicator	Mean		Standard deviation	
	NMS	OMS	NMS	OMS
Lifelong learning	5.44	11.02	3.84	7.66
Tertiary education	17.46	23.09	5.59	6.76

*Source: Eurostat data (European Commission, 2013)*

In the quantitative section of the empirical part a number of six panel regression models are applied to examine the effects of the lifelong learning on economic growth, beside a set of other explicative variables in the EU-27 countries.



**Table no. 2: Impact of lifelong learning at the macroeconomic level**  
**Results from panel regression models**

Explanatory variables	Model 1 Dependent variable: economic growth		Model 2 Dependent variable: Duration of working life		Model 3 Dependent variable: Subjective poverty	
	NMS	OMS	NMS	OMS	NMS	OMS
Lifelong learning	0.51** (0.27)	0.002 (0.03)	0.44*** (0.07)	0.26*** (0.02)	0.07 (0.24)	-0.44*** (0.05)
Unemployment	-0.33*** (0.16)	- 0.2*** (0.08)	0.04 (0.04)	-0.08 (0.06)	0.37*** (0.14)	-0.37*** (0.13)
Initial GDP per capita (ln)	-8.67*** (2.82)	-0.53 (0.79)	-1.60** (0.77)	-2.4*** (0.52)	-10.72*** (2.75)	-14.14*** (1.17)
Gini	1.49*** (0.34)	-0.12 (0.13)	0.27*** (0.09)	0.59*** (0.09)	-0.66** (0.30)	0.003 (0.207)
At risk poverty rate	-1.9*** (0.42)	0.05 (0.15)	-0.21** (0.11)	-0.63*** (0.09)	0.52 (0.37)	0.81*** (0.22)
Tertiary education	-0.01 (0.13)	-0.05 (0.04)	0.05 (0.03)	0.16*** (0.02)	-0.38*** (0.12)	0.21*** (0.06)
Constant	65.66*** (24.43)	11.66* (7.68)	37.96*** (6.68)	45.44*** (5.76)	131.14*** (24.83)	148.25*** (13.00)

Notes. (a) Panel regression model, estimator: Feasible GLS; (b) \* - Significant at 10% level, \*\* - significant at 5% level, \*\*\* - significant at 1% level; (c) Standard errors are reported in brackets; (d) The value of the Davidson-MacKinnon test of exogeneity is 0.54 ( $p=0.26$ ); (e) *C statistic* is 0.60 ( $p=0.43$ ) in the case of the variable third education, and 0.43 ( $p=0.19$ ) in the case of the Gini variable.

Source: own computations

In tabel no. 2 the impact of lifelong learning on the economic growth, duration of working life and subjective poverty is examined through three regression models separately conducted for the NMS and OMS. Besides the lifelong learning, other explicative variables have also been added into the model.

The first step in our regression analysis is to examine whether our data are affected by heterokedasticity, endogeneity and/ or serial correlation. When at least one of these problems is identified, the OLS estimation is still consistent, but no longer minimum variance or efficient. Depending on what kind of problem is prevalent in the dataset, specific estimation methods are required. Even though a number of independent variables are initially suspected to be endogenous (i.e. Gini, at-risk-poverty-rate and tertiary education), the *C statistic* and the *Davidson-MacKinnon test* indicate that all variables behave as exogenous in our regression models and the instrumental estimation methods are useless.

The *likelihood ratio test* and the *Wald test* indicate the presence of both heterokedasticity and serial correlation into our dataset. Given that the endogeneity problem is not found, in the presence of the heteroskedasticity and serial correlation, the Generalized Least Squares (GLS) is the BLUE estimator and therefore it is chosen as estimation method in the regression models reported in table no.2.

Before analyzing the significance of regressors, we shortly recall our hypothesis formulated at the end of the theoretical section. Business education enhances professional competencies at any age, independent on the educational background, and the overall economic and social impact that it produces at the national and EU levels is a positive one. The main variables of interest in all models are the lifelong learning and the third-level education.

In all models where the lifelong learning is found to be a significant regressor, its effect on the dependent variable is a positive one, in the sense that a higher percent of population involved in the process of lifelong learning contributes to the increase of the economic growth rate (only in the NMS), increase of the duration of working life, and also to the reduction of subjective poverty (only in the OMS). In comparison with the lifelong learning, the third-level education is found to be a significant regressor only in the regression models where the dependent variable is the subjective poverty or duration of working life (only for the OMS). Even so, in the case of the OMS, in the absence of lifelong learning, the third-level education loses its significance degree. These empirical findings highlight the importance of lifelong learning for increasing the economic and social performances at the national and European level. The educational attainments better reflect in economic growth, poverty reduction and working life duration when accompanying the individuals' working life trajectories. The third-level education attainments have contrary effects in the NMS and OMS. In the NMS they lead to the decrease in the aggregated level of subjective poverty, while in the OMS they are a factor of subjective poverty. This divergent result is not really surprising, as the subjective poverty reflects the self-assessment of financial poverty, being therefore strongly related to the individuals' expectations and major goals in life. The graduates from higher education programmes are probably more "unhappy" with their financial situation given that, in comparison with the same group of individuals in the NMS, they have higher expectations and aims in the professional life.

The effects of the other explanatory variables are of a lesser importance for our study, so that they are only shortly discussed. The unemployment is a determinant only for economic growth and subjective poverty (with different effects for the NMS and OMS). Social inequality determines the increase of the working life duration and also stimulates economic growth and subjective poverty reduction (only in the NMS). The "at risk poverty rate" and the initial level of GDP per capita are significant determinants in all models (at least for one of the country groups).

Finally, the contribution of lifelong learning to economic growth at the level of NMS (as shown in model 1) could also be seen in another perspective than analyzed above. The lifelong learning deepens the degree of real economic integration as reflected by the value of the initial GDP per capita coefficient in the logarithmic form (usually referred to as the beta coefficient), which is lower in the presence of lifelong learning than in its absence. This finding is reported based on the beta-convergence approach (Solow, 1956; Barro and Sala-i-Martin, 1991). In this light, the model 1 (table no.2) represents the model of conditional convergence within the NMS. The smaller is beta, the longer it will take to a country to reach the steady state, while the larger beta is the quicker the transition to the steady state.

**Policy recommendations and concluding remarks**

This paper has shown that business education, provided through the process of lifelong learning, generates positive effects into the economies of the EU Member States. Business education has a long history and tradition in the OMS, while in the NMS this segment of the adult education is ongoing. The empirical analysis has suggested that the effects induced by business education on economic growth and poverty reduction are more powerful in the NMS than in the OMS. Moreover, the positive impact of the third-level education attainment on the poverty reduction, often discussed in the literature, which prevails in the NMS, is annihilated in the absence of the lifelong learning. We can therefore conclude at this point that lifelong learning enhances the positive impact of the third-level education on economic growth.

Duration of working life is included into the analysis as to allow drawing insights to the impact of business education on the European pension systems which are in a deep crisis. It has been shown that business education, facilitated through the process of lifelong learning, is not just a determinant of economic growth and poverty reduction, but also a factor contributing to the increase of the working life duration. The extension of the duration of working life allows partially surpassing the actual crisis of pensions in the EU, and business education is part of this solution.

Given its positive implications at the macroeconomic level in the long term, business education should be strongly encouraged in all education systems, as a priority component of adult education. In the contemporary economy which is characterized by economic vulnerability within all social categories, investing in business education is even more important than in the past. In our days business education provides a solution for entering the entrepreneurial environment, for changing the professional trajectories at any stage of career, or simply for advancing in the professional hierarchy. In all cases, business education, provided through lifelong learning, allows enhancing professional competencies, which is a gain not only for individuals, but also for the society.

Overall, the economic and social benefits of business education are more important for the NMS than for the OMS. Business education is a major component of adult education, and the process of lifelong learning is the most important channel facilitating the transfer of this kind of knowledge.

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