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### МІЖ ЗАХОДОМ ТА СХОДОМ: УКРАЇНСЬКА ЕКОНОМІЧНА ДУМКА НА ПЕРЕХРЕСТІ ДОРІГ

*Українські економісти, як і суспільство в цілому, знаходяться в процесі переорієнтації зі Сходу на Захід. Однак репрезентативність і вплив їхніх робіт як у Росії, так і на Заході залишаються низькими. Запропонований аналіз публікаційної активності авторів, афілійованих з українськими науковими організаціями (з використанням даних Web of Science і eLibrary) підтверджує дані спостереження. У статті запропоновано в якості першого кроку в процесі переорієнтації сконцентруватися на створенні простору для економічних дебатів на національному рівні. Активні і здорові дебати на національному рівні здатні збільшити шанси українських економістів бути почутими за кордоном.*

*Ключові слова: економічні науки, Україна, активність публікації, контент аналіз.*

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### МЕЖДУ ЗАПАДОМ И ВОСТОКОМ: УКРАИНСКАЯ ЭКОНОМИЧЕСКАЯ МЫСЛЬ НА ПЕРЕКРЕСТКЕ ДОРОГ

*Украинские экономисты, как и общество в целом, находятся в процессе переориентации с Востока на Запад. Однако репрезентативность и влияние их работ как в России, так и на Западе остаются низкими. Предложенный анализ публикационной активности авторов, аффилированных с украинскими научными организациями (с использованием данных Web of Science и eLibrary) подтверждает данные наблюдения. В статье предложено в качестве первого шага в процессе переориентации сконцентрироваться на создании пространства для экономических дебатов на национальном уровне. Активные и здоровые дебаты на национальном уровне способны увеличить шансы украинских экономистов быть услышанными за рубежом.*

*Ключевые слова: экономические науки, Украина, публикационная активность, контент анализ.*

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## THE IMPORTANCE OF INVESTING IN EDUCATION FOR SUSTAINABLE HUMAN DEVELOPMENT. THE CASE OF ROMANIA

*In this article, we expect to underscore the importance of investment in education for sustainable human development by analysing the degree of correlation and interdependence that exists in Romania, between the Human Development Index and two different factors: the public spending for education and the public and private investment in the form of R & D expenditure.*

*Keywords: education, sustainable human development, HDI.*

### Introduction: Knowledge capital – the major challenge of the XXIst century

The stage in which we find ourselves is characterized by "the economy, organization and management based on knowledge" (Nicolescu, 2004). The novelty of these concepts is the translation of the organization assets issues, from tangible to intangible, in the present the firm performance being reflected by the share of the intangible assets in total. In the new economy, intangible assets such as knowledge become the new core skills. We can say that in this period (and in the near future) it will occur a "creative destruction", but very much needed to progress. Indeed, this process of knowledge revolution, that consists in the transition from the economy dominated by natural resources, to the economy dominated by knowledge, is particularly extensive and profound, producing essentially changes, analogous to the ones produced by the Industrial

Revolution, according to experts (Brailean, 2001; Dragănescu, 2003; Drucker, 1999a, 1999b, 2004; Hesselbein, Goldsmith, Beckhard, 2000; Nicolescu, 2007, 2011; Oprean, 2008; Oprean, 2014; Rosca, 2006 and others).

We live in a world that stresses the monetary estimation of intangible resources. We are managing with "cognitive domain" in which ideas are worth billions, while all products cost less. In the vision of Peter Drucker (2004), in the future other factors will be effective: "the traditional factors of production – land, work and capital – have not vanished. But they have become secondary. Knowledge is the main asset that is truly important today". The new economy requires a re-examining of the hypothesis of production factors. Knowledge is a fundamental part of the system of economic and social contemporary development. Dispersion of innovations and high technology conver-

gence will assume a key part in accelerating the significance of knowledge in the context of globalization.

In this context, land, labour and capital are important, primarily as restrictions or as limitations. Without them, even knowledge cannot produce; without them, no management can act. But where there is an effective management, i.e. an application of knowledge upon knowledge, we can always get other resources.

The new economy requires a growing interest to so-called employee's company based on knowledge, to intellectual capital and learning organizations. Thus, the share of intangible assets in the economy has increased. This intangible capital is made up mostly of investment in training, education, research and development, information and coordination, more precisely of investment for the production and transmission of information. In the US, it is estimated that the value of intangible capital surpassed the value of tangible capital (stocks, equipment, infrastructure, natural resources) by 1973.

For full exploitation of intellectual capital, the concept itself should be understood. Without understanding the role of intellectual capital, companies cannot create and implement strategies and policies for assessment, protection and maximization of the "most precious asset". We can say that intellectual capital is, in fact, all monetary and without physical form resources, that have the ability to add value to the company's performance and potential, it is also the term granted to joined intangible assets which empower the organization to function successfully.

Measuring intellectual capital has turned into the main part of examination for researchers and practitioners, the concerns for monitoring and evaluating this type of capital being intensified in the present. As regards the invisible, intangible capital, management faces real difficulties in the assessment and measurement of these types of capital. The traditional accounting have not yet found a solution in terms of their pertinent recording and evaluation, these issues becoming a research topic worldwide.

Information and advanced technologies can essentially change a country's economy. In OECD countries, investment in research and development, in public education and computer programs increased by 3% per year since the 80s. The result is that today, not the natural treasures can explain the discrepancies between countries, but the quality of equipment and human capital. Accordingly, innovation tends to be the only means by which a firm can survive in a globalized economy and strong competition.

Without trying to give a "technical" definition of innovation, we found particularly significant the pragmatic definition given by Drucker (2004): "Innovation is the specific instrument of an entrepreneurial manager, the means by which he exploits the change as an opportunity for different business or different services". This definition was given in 80 and was perfectly valid for that period. But now things have changed significantly, meaning that if innovation in 1980 was a path to success in business, now it is a condition of survival. Today, who does not innovate perish!

Some authors (MacGillivray, Clarke, 2006; MacGillivray, 2007; Sumner, 2004; Tanasescu, Oprean, 2013) bring to the front the idea of well-being, which suggests a way of life, both at typical individual and society in general. Guaranteeing a reasonable standard of living presumes a way of life perfect with human dignity, which is measured by the merchandise and services that individuals have and the conditions under which individuals live. Well-being is a vital part of the human condition, it mirrors a system connected with

socio-economic context in which everybody fits in terms of ownership, level of consumption, material and money related status, social and cultural hierarchy. Consequently, the welfare state shows up as an aspiring individual optimum by his method for producing, sparing and expanding.

In general, well-being measures can be grouped into two wide classifications: objective and subjective measures. The first class measures well-being through certain detectable facts, for example economic, social and environmental insights. Individuals' well-being is surveyed indirectly utilizing cardinal measures. Then again, subjective measures of well-being catch individuals' sentiments or genuine experience in a direct manner, evaluating well-being through ordinal measures (McGillivray, Clarke 2006). One of the first endeavours to build a composite index of well-being was in 1979 when David Morris from the Overseas Development Council created the Physical Quality of Life Index (PQLI). This index combined new born child mortality, life expectancy and adult literacy (McGillivray, 2007; Stanton, 2007; Sumner, 2004).

Another case is the Human Development Index (HDI) made in 1990, combining a long and healthy life, access to information and a good way of life. The economic investigators of the 1980s needed to face critics for that human development methodology was not explicitly connected to economic development. Increase incomes and expenditures are not the only consequences of improvement. It was perceived that a single dimension, for example the Gross Domestic Product, is just a pointer of development, expressed in money related units and not an indicator of human development which is multidimensional. Investments in health and education cannot be added specifically to GNP, but rather can increase the value to human capital and in this matter to contribute to the economy and social welfare. Mahbub Ul Haq (1934-1998), Pakistani economist with Indian economist Amartya Sen, Nobel Prize laureate in 1998, assumed a key part in formulating development model. They wanted to bring individuals into the middle of the public agenda on development strategy at national and worldwide level, and the first Human Development Report was launched with the reason that: "People are the real wealth of a nation." United Nations Development Programme (UNDP) published since 1990 "Human Development Report". The report addresses the fundamental issue, how to make an interpretation of economic growth into human improvement. The fundamental contribution of this report is to compute the yearly Human Development Index for 130 nations at first, subsequently for 182 nations. HDI is a composite index that incorporates education, health, and expectations for everyday comforts and it was the first serious endeavour to assess the development that goes beyond the income dimension.

#### **Investment in education – the key component to ensure long-term authentic human development**

The process of accumulating knowledge is an essential and necessary one, whereas the university represents the most appropriate context for the accomplishment of this goal. Learning the mechanisms of adaptation to change, to the permanent dynamics of internal and external environments for the organization represents an added-value dimension in a competitive academic context. Increased adaptively, learning and efficiency are the prerequisites for survival; one can acquire such understanding from personal and other experiences, both in terms of success and failure (Oprean, Burdusel, Oprean, 2010).

Ideas can define, shape and change a society, hence it is important to consider the various forums of intellectual debate and generators of ideas (academics), their audience as well as the role of the public intellectual: e.g. Confucius – founder of a moral, ethical, philosophical and socio-political doctrine; and Confucian culture has long placed a high premium on education; his teachings are even now more topical than ever; with a strong emphasis on virtue, morality. Furthermore, both Socratic method of teaching – meant to encourage critical thinking and active learning (i.e. the Socratic method is widely used in US law schools) and Confucian philosophy have witnessed a revival in recent years (Burdusel, 2014).

Education is one of the key components through which we become individuals that act and connect on the premise of a typical society and one of the key 'makers' of culture. Because of that, it is an imperative factor for achieving sustainable development (Oprean et al, 2011).

Starting from the assumption that education is a fundamental human right, some studies (Burdusel et al, 2014) examine the role of higher education institutions, and especially humanities, in preparing citizens to cope with the unpredictable and challenging facts of life and effects of other's activities, as well as enabling graduates to relate and effectively communicate with other individuals, communities – from geographical areas either nearer or further away – and better understand the world they live in. Several key documents have endorsed this right and further added new dimensions to the concept of education as a means of social advancement, raising individual and collective awareness about: the power of tradition in assuring smooth continuity and a grasp of modernity, differences in terms of culture, civilization, language, socio-political views and economic development should not generate unbridgeable gaps, and furthermore, the necessity to study related disciplines in order to open new vistas to knowledge and widen the perspective.

The contribution of education to economic development happens through two systems. The primary, and best known is the formation of new knowledge, otherwise called the "Schumpeterian growth" (Schumpeterian growth hypothesis, developed by Aghion and Howitt (1992) and Grossman and Helpman (1991), focuses on innovations that improve the quality of products, so the older products become obsolete through a process called by Schumpeter (1942) as creative destruction). Better instructed people would later get to be researchers and investors attempting to help expand the stock of human intelligence by growing new methodologies and innovations. This brings us to the second mechanism by which education influences economic development, i.e. the transmission of knowledge and information. Schools give the necessary instruction to comprehend the new information and at this section we consider Romania as being among the main nations. Increment in education has enormously encouraged innovation process that occurred in the PC business, for instance, but in the event that there would be no schools to educate students how to utilize these new applications, the innovation impact would have been much reduced.

General, the human capital is dealt with as an investment and the human capital aptitudes can be utilized basically anytime, depending on the social and economic environment in which people can be set at a certain time. More than this, investment is a continuous one, focusing on either the improvement (training or proceeding with training

courses, for instance) or keeping up the human capital stock (periodic medical examinations, for instance).

The aggregated human capital at national level was mainly used to describe the level of advancement of a nation or clarify its development. One regular clarification for the economic boom in the second half of the twentieth century in a few Southeast Asian nations (South Korea, Singapore, Taiwan and Hong Kong specifically) comprises of enormous interests in training by governments and citizens of those nations. In the recent years, it was observed that highly specialized occupations expanded at all levels of education to the detriment of unskilled, weak specialized work and of managers on lower levels.

Governments, without a doubt, play a central part in coordinating the formation and improvement of human capital. Public budgets are generally the main donors, however private spending, households and firms are also likewise important. The beneficiaries of human capital development are both people, organizations and society. Contributing in human capital as a political choice with significant distributional and growth impacts is conditional on every one of these issues.

In the global civilization, the emerging economies that depend on innovations have a priority segment that is the technology advancement that can lead to a high level of competitiveness and human development. Technological progress is fundamental to human progress. The digital, genetic, molecular innovations open new perspectives and they "break limits" about how individuals can utilize technology to develop knowledge, stimulate growth and development. New technologies are disseminated, both between nations and inside them.

Technological innovations influence human development. Human development and technological advancement are sustained and potentiate one another:

- Technological innovations can upgrade human potential and aptitudes;
- Technological innovations are a method for guaranteeing human development;
- Human development is a vital means to support technological development.

As indicating by a report distributed by OECD (2014), the education segment is more innovative than other public sector areas, including health and public administration. The most outstanding distinction between them consists in the proportion of innovative jobs in terms of knowledge or methods (see figure 1 beneath, where sectors are positioned in ascending order of the rate of highly innovative jobs in knowledge or methods). Forty-eight percent of jobs in education include innovation in knowledge or methods, compared with 38% in health and 26% in public administration. Innovation levels in technology, tools or instruments are also higher in education (21% of jobs) than in health (16%) and public administration (13%). One quarter of occupations in education and health include product or service innovation, compared with 18% in public administration.

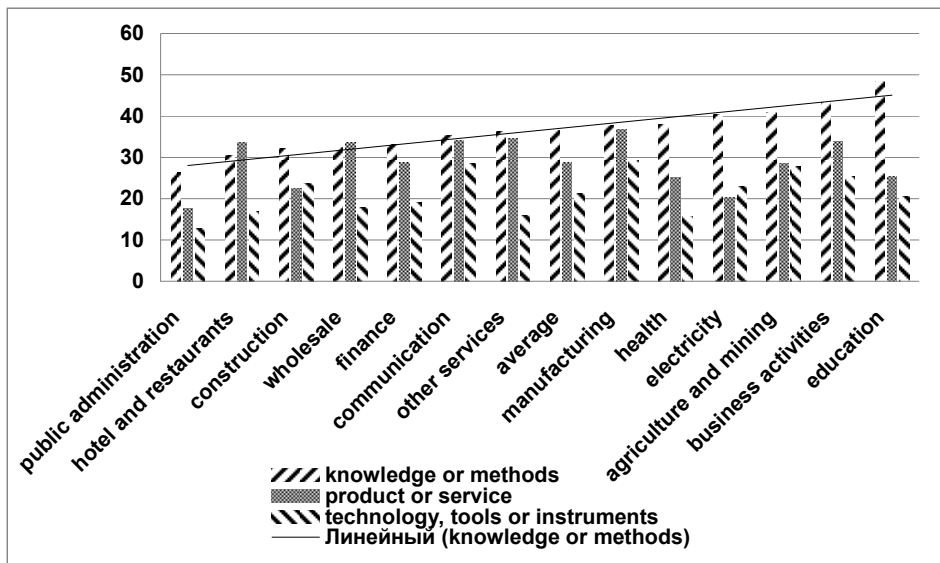


Fig. 1. Professionals in highly innovative jobs, by sector and innovation type

Source: OECD (2014), Measuring Innovation in Education: A New Perspective, Chapter 4

**Research Data: HDI Evolution and correlation analysis**

Since 1990, at the request of the United Nations Development Programme (UNDP), an independent team of experts prepare each year a Human Development Report which is an overview of the major issues facing the world today. Although the series of publications like the Human Development Report has a back history, the specifically dedicated series to Romania started in 1995. In light of the Human Development Index (HDI), the ranking is performed annually, and the countries are ranked according to their level of human development.

The HDI is a summary measure for evaluating long-term advance in three essential measurements of human development: a long and healthy life, access to knowledge and a decent way of life. Just as in the 2013 HDR, a long and healthy life is measured by life expectancy. Access to knowledge is measured by: i) mean years of education among the grown-up population, which is the average number of years of education got in a life-time by individuals aged 25 years and older; and ii) expected years of education for children of school-entry age, which is the aggregate number of years of schooling a child of school-entry age can hope to get if prevailing patterns of age-particular enrolment rates stay the same throughout the child's life. Standard of living is measured using the Gross National

Income (GNI) per capita indicator, expressed in constant 2011 international dollars, converted using purchasing power parity (PPP) rates. HDI highlights the progress or regress of countries in achieving performance measured by the component indicators. So, while achieving a high HDI implies a high level of income, it is more a matter of social policy and public revenue guidance for the efficient development of the social sector. The idea of human development goes beyond per capita income, the human resource improvement and the fundamental needs as a measure of human advancement and it assesses some elements, for example the freedom and dignity of individuals and their part in development.

Romania's HDI value for 2013 is 0.785– which is in the high human development category–situating the nation at 54 out of 187 nations and domains (Human Development Report, 2014). Between 1980 and 2013, Romania's HDI value expanded from 0.685 to 0.785, an increment of 14.5 percent or a normal yearly increment of around 0.41 percent. Table 1 and figure 2 review Romania's progress in each of the HDI indicators. Between 1980 and 2013, Romania's life expectancy at birth expended by 4.1 years, mean years of schooling expended by 2.8 years and expected years of schooling expended by 2.1 years. Romania's GNI per capita expended around 65.1 percent between 1980 and 2013.

Table 1. Romania's HDI trends

Legend 1 <sup>st</sup> column	Life expectancy at birth	Expecting years of schooling	Mean years of schooling	GNI per capita (2011 PPP \$)	HDI value
1980	69,7	12	7,9	10557	0,685
1985	69,6	12	8,6	1256	0,701
1990	69,5	12,1	9	11295	0,703
1995	69,5	11	9,5	10343	0,693
2000	70,5	11,7	9,9	9796	0,706
2005	72,4	13,4	10,1	13363	0,75
2010	73,5	14,2	10,6	16401	0,779
2011	73,6	14,1	10,7	16825	0,782
2012	73,7	14,1	10,7	16806	0,782
2013	73,8	14,1	10,7	17433	0,785

Source: United Nations Development Programme, www.undp.org

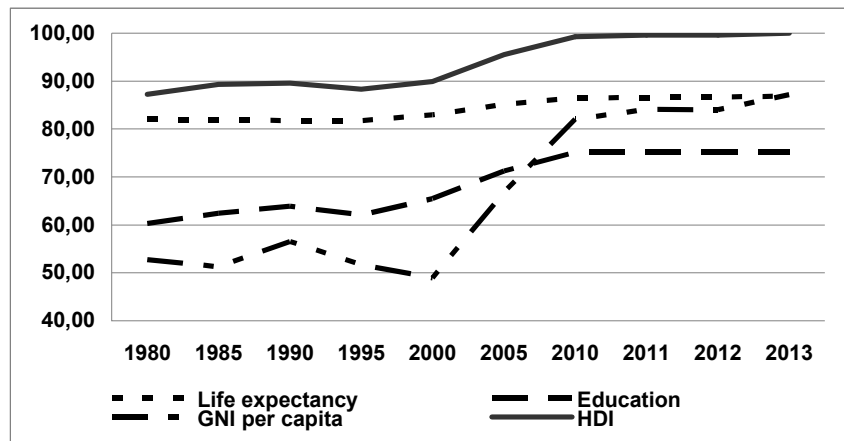


Fig. 2. Trends in Romania's HDI component indices 1980-2013

Source: United Nations Development Programme, www.undp.org

As we have seen, although the trend in Romania of the Human Development Index has improved in recent years, however, our country still has a lower position in the overall ranking compared to other countries in Central and Eastern Europe such as the Czech Republic, Hungary, Poland, Slovakia, etc.

Further, we intend to analyse the correlation between the level of human development in Romania, rated by HDI, and the next two parameters during 2005-2013:

1. The research-development expenditure, or the expenses incurred in research and development units, which refer to the current and capital expenditure within the remit of the respective units in all sectors: business, government, higher education, private non-profit;

2. The education expenditure conducted from the state budget of Romania in the period considered, both current and capital expenditure.

The values of the above presented indicators are shown in the table below:

Table 2. Romania's HDI, education and research-development expenditures during 2005-2013

Indicators	2005	2006	2007	2008	2009	2010	2011	2012	2013
HDI*	0,75	0,813	0,837	0,781	0,774	0,767	0,781	0,782	0,785
Education expend.** – mill RON	2371,3	4309,9	6470,5	7367,9	5176,3	4315,2	4207,6	3994	3867,2
R-D expend.*** – mill RON	1183659	1565802	2177335	2980674	2356907	2413467	2786830	2872728	2464779

Source: \* Data from Human Development Reports 2005-2014, United Nations Development Programme

\*\* , \*\*\* Data issued by the Romanian National Institute of Statistics, statistici.insse.ro

To analyse the definite impact exercised by the public education expenditures and the R-D expenditures on HDI, i.e., to know the pattern and intensity of the relationship

between each two indicators, we compute the Pearson's correlation coefficient (Table 3).

Table 3. The Pearson's correlation coefficient

		HDI	Educ. exp.	RD exp.
HDI	Pearson Correlation	1	,522	,025
	Sig. (2-tailed)		,150	,950
	N	9	9	9
Educ. exp.	Pearson Correlation	,522	1	,519
	Sig. (2-tailed)	,150		,153
	N	9	9	9
RD exp.	Pearson Correlation	,025	,519	1
	Sig. (2-tailed)	,950	,153	
	N	9	9	9

Source: authorial computation, using SPSS Software

By analysing the correlation coefficient, we can observe a positive correlation of average intensity between HDI and education expenses made by the Romanian state budget (the correlation coefficient is 0.522) and between HDI and R & D expenditure (made within the research and development units in all sectors) it is observed a positive correlation, but low intensity (correlation coefficient is 0.025).

The results confirm that education and hence investment in education ought to constitute key segments to guarantee long-term authentic human development, human performance being the establishment of the knowledge base. Invest-

ing in continuing education in this way shows up as a need for people and protection against the risks of unemployment and poverty. Then again, organizations can get a higher benefit by putting resources into the education of their workers rather instead of expending the economic capital stock. Impacts regarding the labour productivity are seen instantly, employees get to be more creative, having a high decisional freedom and can respond more efficiently with optimal solutions in the new and unexpected circumstances.

The unique interest for investing in human capital is reflected in the steady concern of the OECD to support eco-

conomic growth through development projects of educational capital. Cross-national studies reported for OECD nations demonstrate that the rate of return of investment in education is higher for university graduates than for high school. At the same time, unemployment and poverty probability diminishes with increasing in training. Regarding the macro level, the return rate of investment in secondary education in general exceeds the return rate of the capital employed in the business (manufacturing or commercial activities), while the benefits of investing in tertiary education are placed at similar levels to the rate of return on capital in commercial or production activities.

**Conclusion & Discussion.** We addressed the issue of investment in education – the key component to ensure long-term authentic human development. The key principle that should govern the private or public investment policies in modern orders, ought to be the one to empower and support the investment in human and social capital. This rule can be applied to related systems guaranteeing the welfare and quality of life as well as in different parts of social and economic development. Welfare addressed in a traditional style, in light of the system of transferable bureaucratic service and so-called social engineering, must give way to new approaches of active welfare, of proceeding with education and development of life quality assurance systems by resorting to a set of priority investment programs, for example those identifying with investment in education.

Following our analysis, we can observe a positive correlation of average intensity between HDI and education expenses made by the Romanian state budget (the correlation coefficient is 0.522) and between HDI and R & D expenditure (made within the research and development units in all sectors) it is observed a positive correlation, but low intensity (correlation coefficient is 0.025). The outcomes affirm that education and henceforth investment in education ought to constitute key parts to guarantee long-term legitimate human development, human performance being the foundation of the knowledge base.

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### ВАЖЛИВІСТЬ ІНВЕСТИЦІЙ В ОСВІТУ ДЛЯ СТАЛОГО ЛЮДСЬКОГО РОЗВИТКУ: ПРИКЛАД РУМУНІЇ

У цій статті ми підкреслимо важливість інвестицій в освіту для сталого людського розвитку, аналізуючи ступінь кореляції і взаємозалежності, яка існує в Румунії, між індексом розвитку людського потенціалу та двох різних чинників: державні витрати на освіту та громадські та приватні інвестиції у вигляді R & D витрат.

Ключові слова: освіта, стійкий людський розвиток, індекс розвитку людського потенціалу.

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### ВАЖНОСТЬ ИНВЕСТИЦИЙ В ОБРАЗОВАНИЕ ДЛЯ УСТОЙЧИВОГО ЧЕЛОВЕЧЕСКОГО РАЗВИТИЯ: ПРИМЕР РУМУНИИ

В этой статье мы подчеркиваем важность инвестиций в образование для устойчивого человеческого развития, анализируя степень корреляции и взаимозависимости, которая существует в Румынии, между индексом развития человеческого потенциала и двух разных факторов: государственные расходы на образование и общественность и частные инвестиции в виде R & D расходов.

Ключевые слова: образование, устойчивый развитие общества, индекс развития человеческого потенциала.