Assessment of Human Capital and Development.Contributions from Structural Funds

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Abstract

Numerous studies and publications pay attention to the evolution of human capital and the direction of their connection with development and democracy. ([1], [2], [3] etc.) Although from a conceptual point of view, human capital does not have sufficient explanatory power, the assumption that the performance of economic and social development depends heavily on human capital is almost unanimously accepted. From here, also arise the relevant concerns of the academic, business and public business community for assessing human capital and its impact on development. In this context, besides research on the nature of human capital, interdependencies and organizational responsibility and the incorporation of human capital into the economy of the future, other two theoretical and empirical directions, promoted on the one hand by the World Economic Forum or another part of the European Commission through the Structural Funds. The concerns of the two institutions become convergent on programs for human capital. If, [4, pp.2]proposes ”a new benchmark for leaders to build the workforces of the future”, the Structural Funds provide concrete instruments for investing in human capital. The present paper aims to substantiate and exemplify a new framework for assessing human capital and the contribution of structural funds to its evolution.

- Keywords: human capital, development, structural funds

1. Introduction

Human capital consists of those individuals' abilities that are characteristic of them and remain the same in any social environment and can be exploited on the labor market in exchange for economic resources of any kind. Practically, human capital consists of educational capital (skills acquired by individuals in the process of schooling, but also outside it) and biological capital (physical abilities of individuals, synthesized, most often through the state of health). Human capital has developed as a concept in the economy, where it is seen in particular as "an estimate of a person's ability to produce laborincome"[5,pp.2].

The term "human capital" was used in the 1950s and 1960s by economists who recognize the link between economic growth, income growth and the level of workforce training. The concept of human capital has been enforced in the economic literature since 1961, the year of the publication in the American Economic Review of Schultz's article "Investment in Human Capital". Laureate of the Nobel Prize for Economics, an exponent of the New Chicago School - whose theoretical philosophy and slogan was: "*Man - the most valuable wealth of a country*" - the author mentioned was already known through previous studies published on similar or adjacent themes. In [6], he treats human capital similar to the physical one.Knowledge and skills form capital, and

this capital is the product of deliberate investment. Like any other form of capital, human capital can be used more efficiently, contributing to productivity gains in qualitative and quantitative terms. Along with Schultz, promoters of the new human capital theory are Becker [1] and Stigler[7], also laureates of the Nobel Prize for Economics. In [1]defines human capital as monetary and non-monetary activities that influence future earnings. These activities include school education, alternating workplace training, medical expenses, migration, search for price and income information.

2. Human capital and development

Denison [8]explains the sources of economic growth by increasing the quality of human resources as a result of school education. Following on from this, in [1] highlights the role of education by considering that individuals' investments in education are recovered by additional income that is equal to the schooling costs. This investment returns both to the individual in the form of higher wages and to society generating higher productivity. This explains economic growth and individual wage differentials, showing that the incomes of individuals are substantially increasing, depending on their degree of education. Individuals can also improve their returns by investing in their own education and training. More recently, the new economic growth theories call into question the human capital, considered as a determinant of the economic growth. The theory of endogenous growth developed by Romer[9]shows that self-sustaining economic growth is possible through human capital: "Technical progress and innovation are the work of researchers and engineers who are themselves the result of investment in human capital"[9,pp.74]. The author refers to the stock of human capital that a company or a country owns, the economies with a larger stock experiencing, in its opinion, a faster growth.

In a complementary manner, in [10] regards human capital as an investment in formal and informal education and training that improves productivity by providing knowledge, skills and attitudes, on the one hand, and the necessary motivation for economic and social development, on the other hand.

Paprock[11]focuses on the economic behavior of people, especially on how to accumulate knowledge and skills that enable them to increase productivity and earnings; the role of human resources is to contribute to increasing the well-being of the society in which they live.

Another holder of the Nobel Prize, Stiglitz[12]defines human capital as a set of skills and accumulated experience that have the effect of making employees more productive.

Then in [13] is beinganalyzed the link between economic performance and human capital, showing that the development of human capital is an essential investment for the viability and success of an economic unit.

Classical theory of human capital has had and has a great influence on the establishment of educational policies and their correlation with labor market requirements. The content of the concept of human capital has been continuously enriched, developing new dimensions and widening the scope of the original definition.

3. Methodology

In its evolution, for over five decades, the study of human capital, under its various aspects and implications, has involved various research methods: bibliographic research, systemic and statistical modeling and quantitative synthesis and qualitative assessments.

In the present paper, the research and the bibliographic synthesis of the theme addressed are essential. We say this in view of the multitude of conceptual approaches, interpretations and connections with the various fields of economic and social development.
Important international bodies and events (OECD, UNESCO, UNDP, World Economic Forum, etc.) have developed over time their own methodologies for assessing human capital and highlighting its impact on economic and social development processes at regional, national or worldwide. Starting from these, the authors will conceive and use their own methodology based on a general framework of evaluation, which will include syntheses and evaluations of the contributions of the structural funds to the development of human capital as well as correlations based on statistical indicators between the human capital and the economic development.

4. Assessing human capital

The assessment/measurement of human capital has, over the past two decades, mainly concerned with numerous international organizations as well as reputable specialists in the study of human capital and its impact on economic and social development ([14], [6], [15], [16], [17], [10], [9]).
Dae-Bong in [14]highlights two types of human capital. The first one refers to "human as labor force" and is expressed by the economic value added by the labor force contribution alongside the other factors of production. The second type has the meaning "human as creator" and refers to the knowledge, abilities, skills and experience of the connection between "self" and "environment".
This second type looks at human capital in a continuous dynamism, the result of investments in man, education and training throughout the life[6].
The human resource, as a result of investment in human beings, has, at the same time, quantitative and qualitative dimensions. At the same time, these investments will be the result of formal and informal processes and tools to which both the public and private organizations contribute, as well as the man himself.
The most relevant synthesis is found in [14] where "human capital = knowledge as broad meaning". The same author [14,pp.6]appreciates that the assessment/measurement of human capital *"isan important source in terms of suggesting an implementing policies regarding human resources*".
The process of assessing/measuring human capital is generally very complex. It should take into account and incorporate the characteristics of the impact and classification of human capital at a general or specific social level.

4.1.Conventional approach to human capital

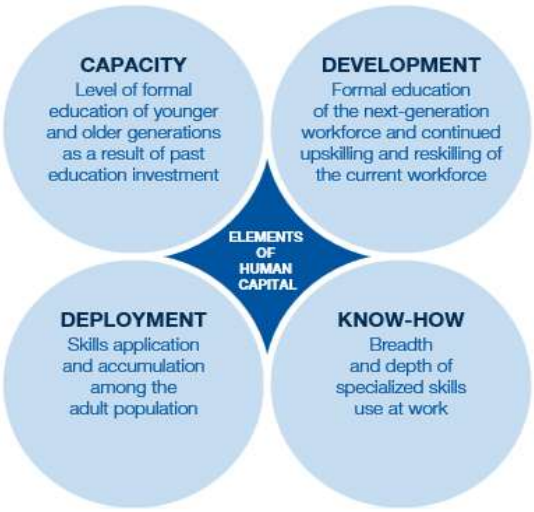
In [14] and [15] there is a critical presentation and analysis of so-called "conventional assessments" of human capital. The mentioned authors also suggest new assessment possibilities based on multi-criteria methods. In the latter we will refer to the following subchapter. Returning to conventional assessments, which are still found in literature and as traditional, they are based on output, cost and income concepts.
Output-Based Approach: initiated in the 1990s, is based on one of the following criteria: the average of school years [10], the ratio of qualified adults to total adults [9], school enrollment rates [18] or accumulated school years during the employment period [16].
Cost-Based Approach: asserts that the human capital estimate is made in relation to the total costs invested in it[19].
Income-Based Approach: It is based on the income earned by a person as a result of his investment in education [17].

4.2.A complex multi-criteria approach

A more profound and complex look at the human capital assessment issue provides us with the four reports on the Human Capital Index designed and elaborated by the WEF [4].

Figure 1: Elements of Human Capital (Source: [4,pp.3]

The evaluation methodology, from 2013 until now, is in a continuous dynamic, the most relevant being, in our conception, the one offered by the last report [4].
It defines and employs four key elements: capacity, deployment, development and know-how, designed to quantify key concepts and provide a practical tool to decision-makers and private business leaders. ((Figure 1)
Starting from this, in the next chapter we will conceptualize and implement a new evaluation framework that can integrate and highlight the contribution of the EU operational programs to the evolution of human.



5. Contribution of the EU Structural Funds to the development of human capital - a new assessment framework

The new framework discussed uses the considerations in Part 1 of [4] as well as the strategic content of some operational programs that aim to develop human capital by formulating from them a structure comprising: components, age group, priority axes operational programs and evaluation indicators. Table 1 presents a model for the operationalization of such a framework for the Human Capital Operational Program (HCOP), period 2014-2020 in Romania (20).

Table 1. New framework for human capital assessment (Source: Authors)

Component	Age Group	Priority axes HCOP						Indicator Human Capital Assessment
		1	2	3	4	5	6	
DEPLOYMENT	15-24	✓	✓					• Underemployment rate
	25-54			✓	✓			• Labor force participation rate • Employment gender gap
	55-64			✓	✓			• Labor force participation rate • Employment gender gap
DEVELOPMENT	1-15						✓	• Primary education enrolment rate

	15-24	✓	✓	✓			✓	• Vocational education enrolment rate • Tertiary education enrolment rate
	25-54					✓		• Tertiary education enrolment rate
	55-64					✓		• Tertiary education enrolment rate
KNOW-HOW	15-24			✓				• High-skilled employment share
	25-54			✓				• High-skilled employment share
	55-64			✓				• Economic complexity

1) The "youth jobs" initiative
2) Improving the situation of young people in the NEETs category
3) Jobs for all
4) Social inclusion and to fight poverty
5) Local development under the responsibilities of the communities
6) Education and skills

6. Conclusions

The succinct analysis presented in this paper contributes to the development of methods for analyzing and evaluating the contributions of specific human capital development instruments such as those provided by EU structural and investment funds. The analysis was conceived in consensus with the preoccupations of some important academic and research environments that were evoked throughout the paper and focused at this stage on a qualitative assessment of the convergence of the instruments mentioned with the current framework described in [4].
Of course, the analysis can be deepened to provide more relevant conclusions. The data available at this time as well as the limited space we have ordered determined us to stop at this stage of the analysis.

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