Human and Intellectual Capital on Ethical Bases in a New Era

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Abstract

Nowadays, especially following the recent financial, economic and social crisis, scholars consider that a shift of paradigm is necessary in terms of economic development. Economic growth must be smart and sustainable. People are in the centre of the economy as drivers and as beneficiaries as well. In order to increase the quality of their lives, they have to improve continuously their skills, to be flexible and competitive. Education is completed through life long learning in a changing, challenging world. Individual, organizational and societal human capital represents the core of the intellectual capital – the real generator of progress and prosperity on moral, ethical bases. Romania has much to do in this regard.

Keywords: *human capital, intellectual capital, sustainable development, moral values, Romania*

JEL classification: I20, I21, I25, I3

Humankind, affected by the 2007 financial, economic and social crisis is looking for new ways, new means, and new meanings. Politicians, business men, and economists are endeavoring to find solutions. The ideas that rose in the end of the 20th century in the context of globalization, digitalization and environmental degradation are now rethought in a new structure meant to contribute for the setting the economy and the society on a beneficial, upward path. Perhaps the most important feature of this structure of ideas, which is not really new, but old as the human thinking is the fact that it reaffirms loud enough a number of values, it repositions and redefines human being to be the center, the motor and equally the beneficiary of the economic development. Whether we talk about growth, or sustainable development, man, in his complexity, not only as a statistical individual, a production factor or a consumer, is expected to move forward the economy and the society, using his strength, knowledge, skills, abilities, beliefs, and emotions. Is his motivation only his economic rationality, aiming ultimately to maximize his utility or to obtain his welfare? Has he lately become more conscious that his welfare is connected to the welfare of others and of the natural

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environment? One can be rational, even economically rational, only if he understands the surrounding reality, or at least its main features.

1. Education and human capital – essential, interrelated matters for the organizational benefits and a smart, sustainable growth in the 21st century

What does human capital mean? Physical or financial capital generates income. Equivalently can be viewed human capital – the knowledge, skills, health, human values, which cannot be separated from their owners and accompany them everywhere. Education, training, health care are investments in human capital and it can be considered that they represent a rational response to the cost-benefit calculation – these kinds of investments are made having in mind the future returns of the investments. Higher education generally provides, with some fluctuations, as Gary Becker shows, an over average income (Gary S. Becker, 1997, pp. 13-19). There are many explanations and points of view regarding the fact that higher education leads to increased revenue. Thus, one explanation is that education leads to knowledge, skills and ways of analyzing problems that increase productivity. Another explanation is that higher education confers accreditation that the person possesses certain qualities and skills like perseverance, creativity etc. useful in his future work (Gary S. Becker, 1997, p. 20).

However, a highly educated individual is not necessarily a great potential employee. In order to be very productive, or a great salesman, or a terrific manager or any other kind of appreciated employee, the individual needs some specific additional qualities: discipline, compliance, communication skills, capacity and willingness to meet clients' needs and to have good relationships with colleagues, etc. (Gary S. Becker, 1997, pp. 20-21). Anyway, advanced education and high professional training are absolutely necessary (even if not sufficient) in order to be able to work efficiently in a high tech, knowledge based economy. Education provided in school, college and university is complemented by various training programs organized at the workplace. As a result of training, attachments between employee and employer are established and, due to these relations of mutual appreciation, the probability of changing frequently the job is lower for the skilled, trained, qualified human resources (Gary S. Becker, 1997, pp. 21-22). According to Gary Becker, countries that have invested heavily in educating the workforce have permanent income increases (Gary S. Becker, 1997, p. 25). According to Edward Denison, in United States, increasing the average worker schooling between 1929 and 1982 explains a quarter of the appreciation of the individual income for that period (Edward F. Denison, 1985, p. 26).

On the other hand, no less important is the fact that the return of the investment in education, in human capital, at individual level, is not found only in financial benefits. It has been demonstrated that more education means more health, reduces smoking, increases motivation to vote, provides cultural openness,

improving the human life in many ways (Edward F. Denison, 1985, p. 22). We might say, back in the area of teleological thinking of Aristotle, that investments in human capital are made in order to rich "the good", basically meaning "the good accomplished through action" (the practical concept of "good" is a particular instance of the metaphysical Aristotelian "good") (Valentin Mureşan, 2007, p. 53). To what extent and in what way the current view on the self formation through education resembles to/reminds us of the process of achieving "virtue", of becoming virtuous? Is the human capital on its way of becoming a humanistic concept or it is still just an economic one? Is there a point in asking that in the current ambient? Are we conscious that education for sustainable well being, for sustainable/real human and economic development has to go beyond surface, has to reach deeper, ethical, moral levels?

Is the development of the human capital a priority nowadays? "The Commission on the Measurement of Economic Performance and Social Progress", created in 2008 at the request of the President of the French Republic, Nicolas Sarkozy, elaborated the Stiglitz Report: "Reforming the International Monetary and Financial Systems in the Wake of the Global Crisis" (Joseph E. Stiglitz, Amartya Sen, Jean-Paul Fitoussi et al, http://www.stiglitz-sen- fitoussi.fr/documents/ rapport_anglais.pdf), a document presenting the vision of some of the most famous economists of our time, including Joseph Stiglitz, as the President of the commission, and Amartya Sen, as an advisor. In the vision of the Stiglitz Report, welfare includes material living standards, health, education, personal activities, political voice, social connections, environmental conditions, and economic and physical security. So, welfare goes beyond pure economic aspects of life, beyond state redistributing wealth and offering social support to people in need. This is not a new vision about what one's needs in order to live a good life, it surely springs from Amartya Sen's beliefs and research on human development and welfare. Reaffirming them in this new context shows that it is general accepted nowadays that human being has complex needs for living a fulfilling life.

To go back in the history, we might even think of Aristotle's *eudaimonia* (well-being, happiness), except Aristotle was describing welfare on a much more profound level, from an ethical, normative point of view, and was placing the issues, according to their importance, in a reversed order: human permanent efforts to attain virtue/excellence/perfection (including education, work, sustained activity on rational bases) were on the first place, followed by health, material conditions and security (and beauty), needed as well in order to flourish. If Aristotle was explaining what men should do in order to obtain happiness, Stiglitz Report and the team of economists and sociologists refer to how the stat / government should act to create conditions for human welfare. Anyway, I find a resemblance here, and this humanistic point of view – placing the man and his complex needs in the center of the societal and political efforts – even though he is still a productive instrument, too, it might be a step forward to a better, more balanced world.

In Stiglitz Report is also said that education acts at least at two levels. It definitely influences the evolution of one's individual – he experiences a better

health condition, has more chances to be employed and more social connections, he is more civically and politically active. On the other hand, education builds one's knowledge, skills and competences, necessary for his work, influencing his wage level, but also the organizational productivity (Joseph E. Stiglitz, Amartya Sen, Jean-Paul Fitoussi et al, p. 165). Thus the employees' knowledge, capabilities, skills influence the organizational benefits and create its competitive advantage in a very competitive global environment.

In 2010, in the document *Europe 2020 strategy* (Europe 2020. A European strategy for smart, sustainable and inclusive growth, European Commission, Brussels, 2010) European Commission established three priorities for the economy of the European Union in the next ten years: *smart*, *sustainable* and *inclusive* growth. "Smart growth means strengthering knowledge and innovation as drivers of our future growth. This requires improving the quality of our education, strengthening our research performance, promoting innovation and knowledge transfer throughout the Union, making full use of information and communication technologies and ensuring that innovative ideas can be turned into new products and services that create growth, quality jobs and help address European and global societal challenges." (Europe 2020. A European strategy for smart, sustainable and inclusive growth, European Commission, Brussels, 2010, pp. 8-9) Measures proposed by this strategy include the following national targets: employment, climate change and energy, reducing poverty, education, research and innovation. Four of the seven so called "flagship initiatives" explicitely refer to the creation of human and intellectual capital: Innovation Union, Youth on the move, An agenda for new skills and jobs (including general, higher, vocational, and adult education, training, life-long learning, non-formal and informal learning), A digital agenda for Europe (Europe 2020. A European strategy for smart, sustainable and inclusive growth, European Commission, Brussels, 2010, pp. 10-17).

2. Human and intellectual organizational capital

If individual investment in human capital provides in time financial and nonfinancial benefits, certain returns on investment, leading to increased quality of life, organizations – companies, firms, small and medium enterprises, economic and noneconomic entities of all tipes and sizes – need human capital, as the main part of the intellectual capital, in order to succeed in a highly technical, digitised, extremely competitive global world. "As we move into the new millennium and find ourselves in a knowledge economy, it is undeniable that people are the profit lever." (Jac Fitz-enz, 2000, p. 1) Employees, working together, provide knowledge productivity, which refer to the capability of acting as a team, based on knowledge, in order to obtain improved, innovative results (Yi-Chun Huang, Yen-Chun Jim Wu, p. 2).

Thus, *human capital*, together with *structural capital* and *customer capital* creates *organizational intellectual capital* (Constantin Brătianu, Adriana Agapie, Ivona Orzea, Simona Agostan, 2011, p. 13). The structural capital includes those

intellectual assets of the organization that are not directly connected to people, that remain as permanent organizational assets even if the employees leave. The structural capital includes know-how, procedures, specialised and special software, secret recipes and technologies, patents, inventions, trade marks, brands, data bases and other intangibles created in time using human capital. They are and remain the property of the organization.

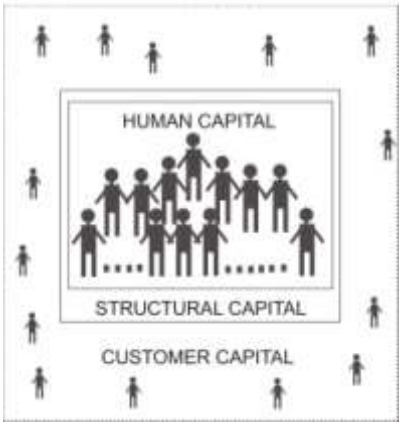

Figure 1. The structure of the organizational intellectual

The customer capital belongs to the organization even if it exists outside the organization. It includes the loyalty of the customers, the relations established in time with them.

Intellectual capital consists of two parts: on the one hand, intellectual potential: knowledge, information, intellectual property, experience; and on the other hand, the ability to transform this potential into a number of elements that create value, included in the final products of the company (Constantin Brătianu, 2006, pp. 17-32).

3. National intellectual capital (NIC)

In a macroeconomic point of view, *national intellectual capital* has the following major components: *human capital*, *market capital*, *process capital*, *renewal capital*, and *financial capital*, and its development affects national competitiveness (Carol Yeh-Yun Lin, Leif Edvinsson, 2011, pp. 3-4). But there is not a clear consensus regarding the definition, the dimensions, and the assessment of the national intellectual capital until now (Carol Yeh-Yun Lin, Leif Edvinsson, 2011, p. 3). Still, it's obvious that the national human capital is the most important and indispensable component of the national intellectual capital. "Human capital includes knowledge, wisdom, expertise, intuition, and the ability of individuals to realize national tasks and goals. This focal area also includes the values encompassed within the culture and philosophy of the nation." (Carol Yeh-Yun Lin, Leif Edvinsson, 2011, p. 4)

There are different ways to measure NIC, used by international organizations (World Bank, Organization for Economic Co-operation and Development, United Nations Economic Commission for Europe) and individual researchers, mostly representing the expansion to the national level of organizational intellectual capital measurement models and using different sets of indicators for the dimensions included in the NIC definition (Carol Yeh-Yun Lin, Leif Edvinsson, 2011, pp. 9-16). In a highly elaborate study published in 2011, Carol Yeh-Yun Lin and Leif Edvinsson proposed a model for the measurement of NIC and applied it in order to analyze and rank 40 countries worldwide. Later, the

study was extended to other countries and clusters of countries, including Romania (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014). The variables proposed in the study for the five components of the NIC mentioned before – human capital, market capital, process capital, renewal capital and financial capital –, including inputs and outputs, are presented in Figure nr. 2.

Human capital index	*Market capital index*
1. Skilled labor*	1. Corporate tax*
2. Employee training*	2. Cross-border venture*
3. Literacy rate	3. Openness of culture*
4. Higher education enrollment	4. Globalization*
5. Pupil-teacher ratio	5. Transparency*
6. Internet subscribers	6. Image of country*
7. Public expenditure on education	7. Exports of goods
Process capital index	*Renewal capital index*
1. Business competition environment*	1. Business R&D spending
2. Government efficiency*	2. Basic research*
3. Intellectual property rights protection*	3. R&D spending/GDP
4. Capital availability*	4. R&D researchers
5. Computers in use per capita	5. Cooperation between universities and enterprises*
6. Convenience of establishing new firms*	6. Scientific articles
7. Mobile phone subscribers	1. Patents per capita (USPTO + EPO)

Remarks
1. Financial capital is the logarithm of GDP per capita adjusted by purchasing power parity.
2. Indicators marked with an asterisk are rated qualitatively using a scale of 1–10.
3. Indicators with objective numbers are transformed to 1-10 scores, by calculating the ratio to the highest number in that indicator and then multiplying by 10.

Figure 2. Indicators in each type of capital included in NIC
Source: Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, National Intellectual Capital and the Financial Crisis in Bulgaria, Czech Republic, Hungary, Romania, and Poland, Springer Briefs in Economics, Springer, 2014, p. 97.

The volume referring to the situation and evolution of NIC in Bulgaria, Czech Republic, Hungary, Romania and Poland, part of a larger study including 48 countries (presented in a 12 booklet series), examines the issues considering the recent financial crisis. It also arises the question if the financial crisis was accompanied by a crisis of the intellectual capital (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, p. xi). A general conclusion of the study shows that countries with solid foundations for the development of four of the dimensions of NIC – human capital, market capital, process capital and renewal capital – have recovered more easily and quickly from the financial crisis. On the other hand, is established a positive interdependence between NIC and GDP per capita: "the higher the NIC, the higher de GDP per capita" (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, p. xvi).

Some results of the study in figures are presented in Table 1: in comparison with the other four emerging countries from Eastern Europe, Romania has the lowest score for NIC, for market capital, for process capital and for financial capital and the last but one position/ranking for human capital and for renewal capital.

Table 1. National intellectual capital scores of Bulgaria, the Czech Republic, Hungary, Poland, and Romania (2005-2010)

Country	Human capital	Market capital	Process capital	Renewal capital	Financial capital	NIC
Bulgaria	5.493	4.929	4.054	1.589	8.646	24.710
The Czech Republic	5.995	5.720	5.378	2.905	9.271	29.269
Hungary	6.674	4.836	5.095	2.301	9.046	27.952
Poland	6.393	4.246	3.895	1.819	8.945	25.299
Romania	**5.829**	**4.219**	**3.806**	**1.685**	**8.594**	**24.133**

Source: Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, National Intellectual Capital and the Financial Crisis in Bulgaria, Czech Republic, Hungary, Romania, and Poland, Springer Briefs in Economics, Springer, 2014, p. 24.

Human capital, the first and the most important element of the intellectual capital, defined as national investment in educated, qualified human resources and measured by higher education enrollment, skilled labor, and public expenditure on education, has not experienced large fluctuations between 2005 and 2010 in Romania, and has even registered a slight increase (Table 2) (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, p. 25).

Table 2. Human capital score (on a scale from 1 to 10) for the five former communist countries included in the cluster

Country	2005	2006	2007	2008	2009	2010
Bulgaria	5.54	5.30	5.50	5.67	5.44	5.51
The Czech Republic	5.85	5.82	5.81	6.10	6.04	6.34
Hungary	6.56	6.71	6.77	6.68	6.68	6.64
Poland	6.11	6.15	6.32	6.34	6.74	6.69
Romania	**5.96**	**5.38**	**5.39**	**5.74**	**6.20**	**6.31**

Source: Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, National Intellectual Capital and the Financial Crisis in Bulgaria, Czech Republic, Hungary, Romania, and Poland, Springer Briefs in Economics, Springer, 2014, p. 25.

In order to understand the position of our country in terms of human capital ranking conducted for 48 countries (mean 2005-2010), we should mention that on the first position was Denmark, with a score of 8.545, on the second Sweden, Iceland on the third and on the fourth Israel, the U.S. position was on the seventh place, and on the last place, the 48th, was Venezuela, with a score of 4.884. Hungary ranked 24, Poland ranked 29, Czech Republic was on the 30th place, Romania on the 32nd and on the 34th place was Bulgaria (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, pp. 104-106).

Regarding the overall intellectual capital for the five East-European countries, it was calculated by summing the scores obtained for the five types of capital (Table 3).

Table 3. The national intellectual capital (NIC) for the five post-communist included in the cluster

Country	2005	2006	2007	2008	2009	2010
Bulgaria	24.64	24.03	24.88	25.30	24.73	24.69
The Czech Republic	29.16	28.94	29.21	29.19	29.32	29.80
Hungary	28.86	28.93	28.15	27.07	27.26	27.44
Poland	23.85	24.01	25.17	25.39	26.42	26.95
Romania	23.84	23.52	24.30	23.17	24.28	25.68

Source: Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, National Intellectual Capital and the Financial Crisis in Bulgaria, Czech Republic, Hungary, Romania, and Poland, Springer Briefs in Economics, Springer, 2014, p. 29.

Relating this time to the national intellectual capital mean (2005-2010) for the 48 countries examined, Romania ranks 39, the last of the five Eastern European countries included in the cluster. On the first place is Sweden (score 39.575) and on last place, 48th, is Venezuela (score 20.092) (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, pp. 104-106).

Given the developments of the last decade, and the stated purpose both global and at EU level – healthy, real, sustainable development – we ask ourselves if assessments made so far in the development of human capital and intellectual capital are sufficient. By its very nature, sustainable development has a strong ethical character. This means that an ethical behavior of the economic and social actors is necessary. Ethical behavior may mean mere compliance with ethical norms and rules or, rather, it means internalization at the individual consciousness of the moral values corresponding to sustainable development. There have been situations where the measurement of the dimensions related to NIC included indicators related to social morality: in evaluating human capital has emerged in some studies the crime rate. Also, in evaluating capital market one of the indicators was named "standards of honesty" (Carol Yeh-Yun Lin, Leif Edvinsson, 2011, p. 13). As noted above, a definition of human capital might include the values encompassed within the culture and philosophy of a nation. It is important to respect/keep a strong tradition? Social values differ from one region to another and change over time as society changes, especially now, in the era o digitalization and globalization. It is debatable whether this change is always an evolution or can be an involution.

4. Conclusions

It is becoming increasingly clear that the new era is based on intelligence, education, innovation, creativity. The traditional measurements of growth, of *economic performance and social progress* are increasingly replaced with other measurements, more related to the human being in its complexity. And intellectual capital, as an essential asset, has to be correctly evaluated (Anthony Wall, Robert Kirk, Gary Martin, 2004).

In a country like Romania, wages are low, prices are high, and competition on the labor market is fierce. It is now very difficult to be employed at all without a high-school diploma. It is hard to get a well-paid job with a university degree, too. In order to live a decent life in an honest, moral way you have to be smart and highly educated.

Scholars and politicians worldwide are aware that global organizational competitive advantage is achieved primarily by intellectual capital, by "the firm's entrepreneurial and strategic asset orchestration capabilities", by knowledge (David J. Teece, 2000, pp. 3-4). Intellectual capital makes the difference and it is even more important as the competition is more intense. Industrial knowledge is more and more valuable and more and more protected by laws. If scientific knowledge is a public good, always valuable, the usage of industrial knowledge by several firms reduces its value to zero (David J. Teece, 2000, p. 15). Think about Apple. Any great company is built and developed on great ideas. Firms compete not just nationally. The real battle is global. The organizations focus increasingly more on the skills, creativity and innovativeness of their employees. The labor market is also global. People are looking for a better life, companies need human capital to create intellectual capital and brain drain phenomenon in less developed countries is growing day by day. The need for education, the need to invest with better results, for better returns in human capital is obvious. There is an increasing competition between universities worldwide.

On the other hand, in order to achieve sustainable development, the foundations of the social, economical and financial global system should be refined on ethical bases. Is this possible in a cynical world with so many divergent interests? Alain Arnaud proposes what he calls "a new financial ecology" for the financial system, based on a moral code, more strict rules and a greater transparency. He also identifies a number of challenges of the moment: more importance given to the protection of human rights and citizenship, better management of the contradictions that often occur between short-term and long-term solutions, rethinking the public services, increasing social cohesion and strengthen the values and principles of community life and more solidarity between social classes and generations in a society characterized by risks and crises at economic, social and environmental level (Alain Arnaud, 2010). Other scholars suggest that business ethics generates within an organization increased intellectual capital (Hwan-Yann Su, 2014).

In our opinion the fate of people, organizations, and nations is currently decided through education on moral, ethical bases. There is no doubt that national intellectual capital is essential in the national economy and its assessment is very important because, according to the results, governs shall adopt policy meant to generate healthy economic growth and a better quality of life of the citizens. As we can see from the studies presented, Romania's situation from this point of view is not very good today. It requires urgent measures. What measures, we ask ourselves. What should be done?

We think that the measurement of the national intellectual capital should take into account, among others, some parameters directly related to the state of the moral values at the national level. Human capital, at the individual level, also includes moral values. Thus, we propose for future research on this topic, scholars to include in the human capital measurement, as a part of the national intellectual capital, an index regarding the national corruption. In our opinion it is impossible to build a sustainable developed society without moral values. For Romania, scholars identify corruption as a real challenge: "Although Romania has good improvement in both tangible and NIC indicators […] corruption […] continue to handicap the Romanian business environment […] (CIA 2012; QFinance 2012b)" (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, p. 83). As we have shown, ranking the human capital for 48 countries in the period 2005-2010, on the first position was Denmark, with a score of 8.545, and on the second position was Sweden. Relating to the national intellectual capital mean (2005-2010) for the 48 countries examined, on the first place is Sweden (score 39.575) (Carol Yeh-Yun Lin, Leif Edvinsson, Jeffrey Chen, Tord Beding, 2014, pp. 104-106). It is well known that Scandinavian countries have low levels of corruption. So it is obvious that the measurements of the intellectual capital reflect the influences of the moral values at the national level. It has been demonstrated that there is a correlation between National Intellectual Capital and Corruption Perception Index (Agata Stachowicz-Stanuch, 2013). What can be done in order to increase the national moral state, this is another question.

But we think that the lack of the moral values represent more than a challenge, more than an external threat for the human being, for the organization, for the stat, it is a threat that stays within human mind, it belongs to the human capital and, thus, to the intellectual capital. This is an internal, human threat.

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