

Theoretical Fundamentals of Human Factor

Nicoleta Maria Ienciu¹

The purpose of this paper is to identify the theoretical approaches presented by the literature on the human factor. In order to achieve such objective we have performed a qualitative research by analyzing the content of several papers published in internationally renowned journals, classified according to the list of journals' ranking provided by the Association of Business Schools (UK), in relation to the theories that have been approached within it. Our findings suggest that from all identified theories, the human capital theory, agency theory, signaling theory and organizational theory are the most frequently approached theories.

Keywords: human factor, human capital theory, analysis, list ranking, research theories

JEL Classifications: M49, M59

1. Introduction

In contemporary times, most disciplines of social sciences show interest in the concept of human capital. Such multidisciplinary interest is the result of a mass awareness, both from individuals and companies, on the fact that human capital provides security and success (OECD, 1998).

The first definitions associated with the human capital concept (Mincer, 1958; Schultz, 1961; Lev and Schwartz, 1971) derive from the definition of capital proposed in 1930 by Irving Fisher, according to which capital is the

¹ Nicoleta Maria Ienciu, Babeş-Bolyai University, Cluj-Napoca, Romania

use of current business. Starting from this idea, a large number of definitions for this concept have been developed by the specialized literature, the most relevant for our area of interest being the accounting approach. In accordance to this approach, the key to success for any entity on the market is the stock of human capital (Flamholtz *et al.*, 2002) which, just like the physical and financial capital, contributes to the its economic development and growth. In the accounting environment, human capital is considered represented by the potential of employees to generate for the entity more future "wealth", determined as the value of surplus benefits already generated by other physical and financial assets of the entity's (Vithana *et al.*, 2011, p. 555).

Starting from the economic theory, we would mention that there have been, in time, many attempts to build a framework of analyzing the investment in an entity's intellectual capital, despite various difficulties met in this sense. The role of knowledge and information in a production system has raised many theoretical controversies, and the problem of the "immaterial" within economic theory is due to the existence of the *human capital theory*, on one side and the theory of economic growth and firm theory, on the other side (Kharrat, 2008, p. 20).

The main objective of our paper is to highlight the most significant theoretical foundations at the basis of human factor, to which purpose we have envisioned an analysis of articles published in specialized journals, internationally renowned, and their identification within the theories related to human factor. The remainder of the paper is structured as follows: the first part presents the research design at the basis of our study; the second part succinctly presents the main theoretical foundations existing in literature in relation to the human factor, and the third part aims at analyzing the articles published in specialized journals, from the point of view of the presented theories. The paper ends by stating the main concluding remarks.

2. Human capital theories

By studying the specialized literature, we notice that several theories on human capital have been developed in time, more than in the case of intellectual capital. Thus, the initiator of the *human capital theory*, Jacob Mincer uses the term „human capital” in the title of an article he was publishing in 1958, i.e. „*Investment in Human Capital and Personal Income Distribution*”. The human capital concept has appeared in the economic literature starting with 1961, the year the article of Theodore W. Schultz (1961) „*Investment in Human Capital*” was published in the *American Economic Review*. Gary S. Becker and G. J. Stigler, winners of the Nobel Prize for Economy are other two promoters of the new theory of human capital. Gary S. Becker defines the human capital as monetary and non-monetary activities influencing the future monetary incomes. These activities include school education, professional training on the job, medical expenses, migration, search of prices and incomes information. *The classical theory* of human capital has had and continues to have a large influence in the establishment of educational policies and their correlation with the labor market exigencies. The human capital concept includes a person's abilities and knowledge facilitating his/her action change and economic growth (Coleman, 1988).

Human capital, as the central production factor in any economic theory is the stock of knowledge and qualification, useful and valuable, embodied in the labor force, resulting from a process of education and professional training. It depends on the man's capacity to mobilize other production factors, to combine them in a specific manner and predetermine them, in order to obtain the desired result.

The benefit arising from human capital investment is not confined merely to the net sum of incomes gained by selling qualified labor force despite the unqualified, but targets the subjective sentiment of intellectual wellbeing, trust, social recognition. Human development requires education, health and a decent life standard. Within the

development strategy, the formation and development of human capital are possible by means of adequate education investment and health funds correctly dimensioned. In different countries and regions of the world, the priorities of government budgets in relation to the public expenses connected to the human capital formation and health and education, respectively, depend on the stage of human development.

The individual is an actual firm, utilizing rare resources (paid work and domestic work of family members) producing satisfactions throughout work, having an organization that requires investments and calculations based on relative prices, the cost of time and others (Becker, 1997). Purchasing and using a personal computer implies learning, which in turn incurs an entry cost higher than the cost of purchasing a good producing merely immediate satisfaction, such as a favorite meal (Becker, 1997).

Besides the previously mentioned theories, there have been, in time, many theoretical interpretations trying to explain how certain financial-accounting information, but not limited to, justify their necessity and importance within an entity's reporting. Among the most representative interpretations, we would mention the stakeholders' theory, the legitimacy theory and the agency theory.

According to the stakeholders' theory, it is believed that an entity's management performs activities requested by the stakeholders and reports to them information connected to the performed activities. The theory suggests that stakeholders have the right to be supplied with information on how the entity's activities reflect upon them, even if they choose not to use the respective information and even if they cannot play a constructive role in the entity's survival (Deegan, 2000). This theory expands the organizational liability beyond the entity's own financial or economic operations, suggesting that entities will opt for reporting information on their intellectual, social and

environmental activity regardless of whether the request is compulsorily formulated or not.

The legitimacy theory is strongly connected to the stakeholders' theory. It points out that entities continuously try to act within the limits and in accordance with the norms of the communities they belong to. Adopting such theory means an entity provides additional information about its activities if the management believes the respective activities have been requested by the community where the entity operates. The legitimacy theory is based on the notion of "social contract" to be concluded between the entity and the society where it operates. The social contract means to represent the society's expectations with regard to how the entity's activities would be managed (Deegan, 2000).

In accordance to this theory, entities should continuously operate such as to respect social values (Guthrie and Parker, 1990). This can be done by means of proper communication, starting from the reports prepared by the entity. Lindblom (1994) suggests that entities may use their published reports in order to prove the management's care for social values or to divert the community's attention from the negative impact of the entity's activities.

According to the agency theory, the presentation of human capital information is a control mechanism for the managers' performances who are stimulated to disclose voluntary information related to this subject in order to maintain their position in the market (Oliveira et al, 2006). It is commonly known that one of the qualities of the accounting-financial information is its transparency, which will lead to the reduction of inequality in the society, just as the purpose of agency theory is to reduce the informational asymmetry (Nielsen and Madsen, 2009).

Considering that there have been many interpretations developed in time in association with the human factor and the way the related information are presented for internal and external users, we believe

highly important to conduct an analysis of the current status of the theoretical foundations approached by the contemporary literature. Their identification allows us to outline general picture of the theoretical approaches influencing our area of interest.

3. Research design

The present study emphasizes a theoretical approach through which we have conducted a qualitative analysis of the content of articles published in prestigious journals, internationally acknowledged. In order to determine the general selection criterion for journals we have used the institutional approach in analyzing the journals' hierarchization. For this purpose, we have taken over and processed information regarding the journals rankings supplied by the Association of Business Schools (ABS), in a guide referencing the quality of academic journals, version 4, March 2010, England.

According to the classification preformed by ABS, there are a total of four categories of values for classification of journals, out of which we have selected the journals belonging to the first two categories, as they are considered high quality and prestigious journals in the given classification. Therefore, we have selected the journals depending on *Grade four* and *Grade three* from the published list. We have considered two categories of journals - Accounting and Finance – because interdisciplinary journals in accounting are included in other categories as well (e.g. finance, business history, management etc.)

Within these journals we have analyzed their content in relation to the articles treated inside, on the subject of intellectual capital. The selection criteria for the articles were based on one hand, on key words searches related to the theme of human capital in each article title, abstract, text or references, and on the other hand, on manual searches in the article content. Following these searches, we have prepared a preliminary list of articles compliant to the conditions mentioned previously. Moving on to the next phase of the analysis, we

have revised the list of selected articles and we have considered useful for our analysis only those articles presenting information related to human capital, thus eliminating those with a simple mentioning of this term in the text or in the references. After that we have analyzed if the articles present or develop a theory related to this type of capital. The period of analysis was represented by the last 5 years wherein specialized articles in the field of human capital have been published, starting with 2006 and until 2010.

4. Theoretical background in the field of knowledge

We believe the presentation of theories related to human capital plays a special part in conducting a research, for which reason we have included in our present study a qualitative analysis of articles published between 2006 and 2010 by prestigious journals of international recognition, according to the ranking offered by the Association of Business Schools (UK). We would mention that we have considered relevant for our analysis only the articles presenting, developing, or testing a theory associated to the human factor, thus reaching a number of 50 articles submitted to analysis (appendix 1).

We have therefore identified in every article the main theories presented (Table 1) ranked into sanctioned and recent theories, from the desire to emphasize any difference between the long debated theories in literature and those approached more recently which haven't been developed in time.

Tabel 1.

Identified theories' classification

Consacrated theories	Recent theories
Agency Theory	Intellectual Capital Theory
Human Capital Theory	Laughlin's Theory
Organisation Theory	Konrad Assets Theory
Stakeholder Theory	Brannstrom et al.'s Theory
Legitimacy Theory	Tobin's q Theory
Accounting Theory	Theories X and Y of Mcgregor
Transaction Cost Economics Theory	Theory of Economia Aziendale
Actor Network Theory	Becker and Mincer Theory
Normative Theory of Policy	Gidden's Structuration Theory
Social Cognitive Theory	Greenwood et al.'s Institutional Change Theory
Social Identity Theory	
Sociological Theory	
Equity Theory	
Political Theory	
Contingency Theory	
Signalling Theory	
Resource Dependence Theory	
Noninstitutional Theory	
Boundary Theory	

According to our analysis, the most frequently approached theories are::

- (1) *agency theory*, found it in 8 articles - Li *et al.* 2008; Abeysekera 2008; Mouritsen and Sof 2006; Nielsen and Madsen 2009; Cerbioni and Parbonetti 2007; Van der Zahn *et al.* 2008; Wagenhover 2006; Widener 2006.

- (2) *human capital theory*, approached within 5 articles - Carrera *et al.* 2008; Lajili and Zeghal 2006; Abhayawansa and Abeysekera 2008; Bras and Rodrigues 2007; Gelinas 2006.
- (3) *organisational theory*, within 5 articles – Gowthorpe 2009; Johanson 2009; Bukh and Jensen 2008; Buszko and Mroziewski 2009; Murthy and Abeysekera 2007.
- (4) *signalling theory*, within 5 articles - Chin *et al.* 2006; Oliveira *et al.* 2006 ; Van der Zahn *et al.* 2007 ; Gus de Franco and Zhou 2009 ; Singh and Van der Zahn 2008.
- (5) *legitimacy theory*, in 4 articles - Whiting and Miller 2008; Samudhram *et al.* 2010; Beattie and Thomson 2007; Khan and Mohobbot Ali 2010.
- (6) *intellectual capital theory*, within 4 articles - Ahonen 2009; Cuganesan and Dumay 2009; Bozzolan *et al.* 2006; Nielsen and Dane-Nielsen 2010.

The remaining theories have been approached to a smaller extent by the literature, they can be found in two articles at the most, between 2006 and 2010. The authors having written the largest number of articles in this period make no express reference to the most frequent theories. Moreover, some of them have developed their own theory, such as the Becker and Mincer Theory, Giddens's Structuration Theory or Laughlin's Theory having created their own ranking of human capital. We believe that the presentation or development of a theory is necessary in any study, and a permanent reference made to a theory's postulates increase the relevance of the study, giving it a distinct scientific character.

5. Concluding remarks

In the field of human capital research, we encounter a series of theoretical interpretations, founding the existence of human capital,

emphasizing the importance of such type of capital, as well as the need of information from the users of accounting information.

As a result of the analysis performed for the articles published in international journals, renowned according to the ranking given by the Association of Business Schools (UK), most approaches refer to the agency theory, human capital theory, organization theory and signaling theory, all of them theories lying at the basis of the human capital evolution and development, as an endogenous factor, creator of added value. Considering the results of our analysis, we believe that by considering these theories within human capital researches would facilitate the understanding of its significance and role in an entity's economic life.

The study presents several limits for the research. One of them is the relatively small number of selected articles, which was in fact inevitable as we have considered journals ranked only in accordance to the Association of Business Schools (UK) and the relatively small time period of analysis. In our future research we will have in view the analysis of more journals according to other ranking lists supplied by other institutions, such as the French National Centre of Scientific Research (CNRS), which has published a list of journals ranking in June 2010, or the important university centers of the world, as part of a common Excellence in Research for Australia (ERA), issued by the Australian Research Committee (2010) from which we will select a larger number of articles. We will also be considering the extension of the analysis period, for a longer period of time.

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Appendix 1**Journal's list**

1	Abacus: a Journal of Accounting and Business Studies
2	Accounting and Business Research
3	Accounting Auditing and Accountability Journal
4	Accounting History
5	Accounting Horizons
6	Accounting Review
7	Accounting, Business and Financial History
8	Accounting, Organizations and Society
9	Advances in Accounting : a Research Annual
10	Behavioral Research in Accounting
11	British Accounting Review
12	Contemporary Accounting Research
13	Critical Perspectives on Accounting
14	Journal of Accounting and Economics
15	Journal of Accounting and Public Policy
16	Journal of Accounting Auditing and Finance
17	Journal of Accounting Education
18	Journal of Accounting Literature
19	Journal of Accounting Research
20	Journal of Business Finance and Accounting
21	Journal of Management Accounting Research
22	Management Accounting Research
23	Review of Accounting Studies
24	The European Accounting Review
25	The International Journal of Accounting
26	Comptabilité Controle Audit
27	Accounting Forum
28	Financial Accountability and Management
29	Review of Quantitative Finance and Accounting

Appendix 2

Analyzed articles

1	Abdul-Halim <i>et al.</i> 2009
2	Abeysekera 2008
3	Abhayawansa and Abeysekera 2008
4	Ahonen 2009
5	Anderson and Dekker 2009
6	Anessi-Pessina <i>et al.</i> 2008
7	Aura <i>et al.</i> 2008
8	Beattie and Thomson 2007
9	Bozzolan <i>et al.</i> 2006
10	Branco and Rodrigues 2009
11	Brander 2007
12	Brannstrom <i>et al.</i> 2009
13	Bras and Rodrigues 2007
14	Bukh and Jensen 2008
15	Buszko and Mroziewski 2009
16	Capalbo and Clarke 2006
17	Carrera <i>et al.</i> 2008
18	Catasus <i>et al.</i> 2009
19	Cerbioni and Parbonetti 2007
20	Chaudhry and Roomi 2010
21	Chin <i>et al.</i> 2006
22	Cuganesan and Dumay 2009
23	Cuganesan 2006
24	Cuganesan <i>et al.</i> 2007
25	Dumay and Guthrie 2007
26	Gelinas 2006
27	Gowthorpe 2009
28	Gus de Franco and Zhou 2009
29	Hagg and Scheutz 2006
30	Jing <i>et al.</i> 2008

31	Jobome 2006
32	Johanson 2009
33	Khan and Mohobbot Ali 2010
34	Lajili and Zeghal 2006
35	Mouritsen and Sof 2006
36	Murthy and Abeysekera 2007
37	Nielsen and Dane-Nielsen 2010
38	Nielsen and Madsen 2009
39	Oliveira <i>et al.</i> 2006
40	Rimmel <i>et al.</i> 2009
41	Roslender 2009
42	Samudhram <i>et al.</i> 2010
43	Singh and Van der Zahn 2008
44	Sujan and Abeysekera 2007
45	Van der Zahn <i>et al.</i> 2008
46	Van der Zahn <i>et al.</i> 2007
47	Wagenhover 2006
48	Whiting and Miller 2008
49	Widener 2006
50	Wyatt and Frick 2010

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