

THE HUMAN CAPITAL AND ITS QUANTIFICATION AT AN ADMINISTRATIONAL LEVEL

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Abstract

The recent and present evolution, typical to the new economy, has emphasized certain weaknesses of the financial book-keeping, incapable to outline these immaterial assets which determine large differences between the transaction stock market value and the book-keeping one. More or less identified with the human capital or with the human capital, these notable differences, which surpass the company's fixed assets, were the study object of numerous research studies in the USA and the western European countries. Most of the specialists involved set themselves to quantify these human capital and to transpose them in the book-keeping balance sheet or in other instruments which can ease the decisional process concerning the human resources of the company. The work in hand is an inventory and it points out the main evolutions of this research, emphasizing the elements which bring important contributions in the quantification of the human factor and its potential in the company.

Keywords: human capital, accounting, goodwill, balance scorecard

I. Introduction

In the modern world it is more and more debated that the growing difference between the book-keeping value of a society and its transaction value or stock market represents the intellectual value of the capital accumulated. The stock market capitalization can be two or three times or even larger than the society's book-keeping value. Preoccupations for a formal quantification of the human capital began in the USA, in the 1960s, when a research current proposed to include it in the book-keeping balance sheet, but they had no practical consequence. The quantification problem of the active people has drawn the attention of many specialists, especially after the 1990s, when immaterial elements from within organisations have registered visible growth. If the book-keeping attempts had no success until now, the evaluation of the human capital continued on the costs/advantages relationship, with the construction of the strategic board and other interesting forms.

II. The human capital and the book-keeping balance sheet

Initially, the human capital book-keeping had as an objective the bookmaking of their values in the book-keeping balance sheet. As a result, after the exerted pressure concerning the improvement of the informational system in the investors direction, but also for the support of the internal decision, the current initialized in the USA had as a main idea the formal reconnaissance of the importance of the human factor in the patrimonial value of companies, by including the human resources in the assets balance sheet.

The attempts which aimed at the book-keeping of the human capital determined the emergence of two theoretical currents:

- the human capital theory promotes the initiative of economists Schultz(1961) and Becker(1964); the human factor is considered an asset which has a currency value for the ability, knowledge and its experience ensemble; as any capital, it must be the object of several investments and maintenance costs, which determine the emergence of advantages to the company where the activity is conducted;

- the human relationship school, brought to life by Rensis Lickert, for which the evaluation of performances methods, established exclusively on criteria which aim at the short-term profit, can determine the emergence of new administration methods susceptible to alter the human relationships, and finally to be unfavourable for the long-term profit.

The first book-keeping methods of human resources were meant to evaluate costs, as well as the value of this important production factor, underlining, in this way, the surplus of profit which they add to the company where their work is implemented.

The method of historical costs, initially developed by Brummet, Framholtz and Pyle(1968), acknowledged and registered those costs with the staff who had connections with the investments, such as recruitment, selection, integration, training, familiarizing, promotion and adaptation problems at one's work place. These assets generate productive effects, which justify comprisal in the investment of human resources recruitment. On the condition that they could be conveniently pointed out and attached to a book-keeping exercise, these costs must be dampened on the useful life time of the human capital. The duration is calculated depending on a series of probabilities, such as life duration of individuals, their health, retirement age, the settling day of the work contract etc.

The method of cost replacement was presented by Framholtz(1973), as an alternative or a possible add-on to the latter method. Based on the bringing up-to-date of historical costs principle, the method has as an objective the registration of expenses which can be set to identically reconfigure the human potential which is at a company's disposal at one time or another.

The method of cost opportunity. The cost opportunity is defined as being the value of human resources in its most favourable alternative usage. The representants of this method, Heximian and Jones(1967), suggested a competitor auction system within the company, where those responsible with the divisions are meant to "buy staff". In the whole, the auction has to permit the establishment of a balanced situation which represents the "price" of a group of people, assimilated by the economical value incorporated in the company's assets.

The measuring of the human resources value had more attempts, initially all in currency, but some models integrated economical and behaviour variables as well.

In 1963, Hermanson suggests two measuring techniques:

- the "goodwill" latent method (hidden), which takes into consideration a prediction of future profits and assigns to human resources any surpassing of normal profits foreseen in a certain sector;
- the method of bringing up-to-date the value of the future salary tide, balanced with a factor which measures the relative efficacy of human resources of a company.

The models which combine a non-monetary, behavioural quantification with a monetary one, supporting itself on the works of Lickert(1976). In 1985, Framholtz emerges a model of the value brought up-to-date of the future services or, to put it, the value of human resources is represented through the stream of earnings brought to the company by the staff.

The first book-keeping attempts of the human capital, published in financial situations, remained limited concerning their spreading. In 1966, the R.G. Barry Corporation society applied the method of historical costs, but did not insist only in a few years in practicing it. The places in which these attempts were implemented were diverse, but limited to organisations or parts of these in which the grey cells, ability and professional knowledge are determined in obtaining the product or the service provided for the market.

The book-keeping and financial magazines from the USA and western countries spread these new ideas until the 1980s, but their propagation by management magazines of human resources was slow and limited, marking the specialists' scepticism in the possibility of using the results of such papers. All models which appeared were subjected to diverse criticism, such as:

- the normal nature of "human capital" raises the problem of its identification an immobilization title; or the book-keeping model with a dominant patrimonial can't easily pass from sight because on an asset such as this the company is not the owner;
- the diverse methods of evaluation proposals meet great difficulties at reckoning, which remain exposed to subjective estimations;
- the notion of value is tackled only in terms of costs for companies or of earnings for individuals, but not as advantages for the company; the economic value of human resources refers more to their capabilities and abilities, and not to costs;
- the high complexity rank and the application cost in practice of these models suggests a break in their normal usage;
- the scientific validity of models was considered uncertain, because of some concepts which are considered unclear, imprecise;
- research was based on the hypothesis of simple addictiveness and remained cantered on the intrinsic value of individuals, ignoring the collective and administrative context of work, but also the synergic effects of their cooperation.

Therefore, the approach which favoured the research concerning the measuring of the human capital has imposed as a susceptible approach to attract a minimum of consensual thematic and practical bases. Furthermore, the book-keeping standardizations at a national and international level did not take into consideration the preoccupations concerning the human capital book-keeping.

III. The re-launch determined by the growth of the human capital

The growing importance of societies with grey cells, dematerialization of the company's activities and modification of the asset immaterial weights in the total assets re-launched the book-keeping debate concerning evaluation of assets. Even more, by increasing the fusion-acquisition actions, which generally emit a supervalue, a fitting problem has risen concerning the meaning and the abilities of this supplementary value.

Despite the fact that in this era, the post industrial one, companies depend on all points of view on knowledge and information and that they have to grant a special attention to the development of human and intellectual capital, the financial book-keeping did not response to this change through an adequate book-keeping model (Framholtz and Main, 1999).

In the case of strengthening the companies integrated in the same perimeter, the conclusions resulted from the difference between the acquisition cost of the title of a branch and the adequate value of their own capitals presented in the balance sheet, but the actual practices and recommendations generally aim at their dampening as fast as possible.

The book-keeping scientists are generally favourable to the partial or total activation of certain administration costs of human resources, such as recruitment and moulding (Martory and Pierrat, 1996). And O.C.D.E. is, starting with the year 1996, a constant support of certain book-keeping modifications which suit better the new situations.

The integration of these concerns has not progressed at all in the book-keeping approaches, because the foreseen measures encounter draft (the purpose of book-keeping information, the definition of the assets) and practical (the evaluation method and quantification problems) difficulties.

IV. Management and cost control

The importance given to the evaluation of the human capital has blurred in the 1980, when research concentrated on "the human cost". The organisations' interest was to reduce costs and find new sources of productivity, to have a better understanding of the effects of continuous training. All in all, their management was aiming at the cost-advantages analysis, which could permit the support needed for the decisions taken in the human resources domain and take into consideration the hidden costs of this kind of measures.

Based on the cost of opportunity methodology, the works of Lajoinie(1980) and Martory(1980) develops this issue in terms of cost/advantages, initially aiming at the study the susceptible economic advantages and compensate for costs of improving the work conditions, and then of the accidents, of strikes or of a managerial decision. Savall(1979) developed the "costs/hidden performance" concept, with the

purpose of evaluating the dysfunctional administration of costs or the advantages of a social improvement measure, such as staff rotation, the quality of products etc.

Spencer(1986) and Cascio(1987), in the USA, were preoccupied with the behavioural costs in work and the costs and advantages of selection procedures, of training procedures and employee assistance. Companies like Ericsson and Telia have elaborated, in Sweden, reckoning methods which allow the evaluation of the cost of sick leaves and staff rotation.

The methods of decisional support were destined to ease taking internal decisions within the organisation and proceed from administration or internal control book-keeping, in a perspective of social immobilization strategies of the human resources. Most often they are used within the control of social administration and social hearing methodology, in domains such as:

- the politics of the work place(in a recession period it is better to license or preserve staff, to avoid eventual replacement costs);
- recruitment and human resources moulding politics(it is preferable to train the existing staff in order to accomplish new tasks, or to recruit staff already experienced, but costly it is therefore better to recruit an already trained staff, or to recruit at a lower level and to ensure its training from the inside);
- the administration of time spent at work(fixing a selection model of substituting the temporary employment with a permanent one in the case of season activities);
- the evaluation of the efficiency of one's investment in a training programme.

These methods of book-keeping brought along an additional clarifier within the investments politics, by integrating the social costs in criteria and selection reckonings of investments, by taking into consideration the human conditions used in the exam of different equipping possibilities. The emergence of new administration control instruments in the administration of employees brings closer this domain of administration to human resources.

V. The appearance of scorecards

Piloting and controlling the immaterial potentials of a company has become an urgent necessity in the last decade of the 20th century. Because the traditional book-keeping model is insufficient in rendering the reality of immaterial elements, new approaches have emerged which aim at the establishment of connections between operational performances and the company's strategy. The works of Kaplan and Norton(1999), through which the balanced scorecard is promoted, permitted a better understanding of this approach, which is being experimented for more than ten years now.

Associating the strategic indicators and the result indicators, this model of scorecard presents the characteristic which approaches the company's strategy after four axes: clients, process and innovation, practical administration and practical finance. The "practical administration" axis is largely based on human capital, intercepted

through the employees' potential, motivation and their responsibility, but it is not picked up as a supporting element of the capitalization of the innovation process and the client satisfaction.

The developing of reflections over the managements capacities has led to several questions over the value of the intellectual capital of the company. Petrash(1996), manager of the intellectual assets and manager of the capital administration at Dow Chemical, emerges the most simple formula to reckon the intellectual capital:

The stock capitalization - the book-keeping value=value of the intellectual capital.

At the Swedish company Skandia, the intellectual capital includes:

- the human capital(which exists in the head of employees);
- the structural capital or the organizational one(what remains in the company when employees leave at night), which is also made up of the client and relationships capital, of processes and the capital of renewal and development.

Skandia developed a new type of strategic scorecard which highlights the human resources of the company, but its generalization lasted for three years. Its purpose is that to emphasize the riches hidden by Skandia. The human capital is defined as being a combination between the employees knowledge, their talent, their innovation spirit and each and everyone's capacity to fulfil their tasks. The definition includes, as well as, societies values, culture and it's philosophy.

Destined to replace the traditional budget, the scorecard of the "immaterial capital" is presented as a mobilization instrument of the human resources, as well as an evaluation one. Concentrating on five domains of the success key factors (finance, clients, process, renewal and human development), the managers identify the key indicators of measuring the performance. They constitute three types of measuring: totalization of units, levels of the monetary value and percentage. The navigator offers a capitalization of the immaterial determined with the formula $i C$, where i is an efficiency coefficient of the administration in the usage of the immaterial capital, and C is measured from the investments expenses aimed at the future development of the company. And other societies followed the example of Skandia and experiment models of the same type.

VI. Conclusions

The problem of book-keeping the human capital was born out of the preoccupation and interest of scientists in book-keeping which, for twenty years, focused on the evaluation in monetary terms, with the ambition of integrating the human investment in the book-keeping balance sheets. The results were not the ones anticipated. The book-keeping model is today interpolated to his capacity of not responding to a higher capitalization demand of the assets accepted by the ones who settle the book-keeping.

When the human element is intercepted in cost terms or in a perspective of evaluation of risks and performances, its integrity in the book-keeping administration seems simple and pertinent. The devices nowadays have the tendency to detach from the exclusive financial evaluations, providing the opportunity for the human capital to be

presented under a quantitative unmonitored form or even under a qualitative one, emerging the strict book-keeping, in monetary terms.

The strategic scorecards can provide, at the same time, capitalization elements for the third party/person and set up the support in the internal decision, incorporating this "assets" so difficult to evaluate.

The followers of the immaterial capital evaluation are conscious that the purpose of supplying an objective measure is not as indispensable as the advancement of knowledge in the importance of the human factor in development and the organizations' perennially and the administration of its behaviour in the direction of the great administrative purposes.

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