

HUMAN CAPITAL'S THEORETICAL MODEL AND SUSTAINABILITY: INVESTMENT IN TRAINING AND FUTURE VALUE OF INTANGIBLES

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Abstract

Human capital refers to the set of skills and competencies of people that generate value within the business framework, where we include creativity, experience, skills, training, motivations, and different competencies. These human competencies could contribute to competitive advantage for many companies and, often, the most valuable resource. Skills and employee knowledge are essential to obtain a lasting competitive advantage. In addition, training is one of the critical factors determining an organization's effectiveness. The success of any human resources strategy, specifically a training activity, should be measured by what contributes to the achievement of the organization's stakeholders. Therefore, its analysis and management are necessary and vitally important to increase the company's sustainable value. The main objective of this paper is to propose a theoretical model that analyses the influence that the accumulated investment in employee training has on the sustainable value of companies' intangibles. We presented a simple linear regression model to explain it, and the main result of this paper proves that a significant investment in human resources is reflected in better and more sustainable results in the company's future market value.

Keywords: *Intellectual capital, human capital, stock market value, investment, sustainability.*

1. Introduction

The growing concern about intangible resources is unquestionable. Although they have always existed in organizations, companies did not begin to worry about their importance until the mid-nineties of the last century. The process of economic globalization leads to a society of constant change, where the weight of knowledge is constantly growing. In a knowledge-based society, intellectual capital constitutes the key resource for organizations. The knowledge economy requires creating knowledge products and services, which is a logical step because knowledge is the future. That is why it is understandable that many companies are forced to change their approach for simple survival. This has led to intangible resources being the main drivers of an economy in constant progress and dynamism. Factors that have contributed to increasing the importance of intangibles in the company are the increase in business competition motivated by the globalization of markets and the advent of information technologies, which have their clearest exponent on the Internet. Other important changes that the current economy has brought are the deregulation of key economic sectors, the need for differentiation, and the preponderance of service companies over production companies, the geographical dispersion of organizations, and the strengthening of regimes of intellectual property (Cole, 1998; Teece, 1998). In the knowledge economy, the key to the success of companies is their ability to improve the economy. Therefore, the organizations' current trend is to focus more on intangible resources, especially those based on knowledge, the intellectual capital. When we talk about intellectual capital (IC), we see the need to distinguish the three dimensions of it: human capital, structural capital, and relational capital. Human capital refers to the set of skills and competencies of people that generate value within the business framework, where we include creativity, experience, skills, training, motivations, and different competencies. Structural capital refers to the group of intangibles that make up the way a company is organized in such a way that they remain in it even if an employee decides to leave it. Among them, we can include information and communication systems, work processes, patents, copyrights, and intellectual properties. Finally, relational capital includes all those relationships of the company, not only with customers but also with all the stakeholders that are part of the environment of the company. The growing importance of these intangibles naturally challenges the way in which organizational behaviour and functional models are established. Therefore, the future of organizations will

depend largely on how they manage their intangible resources. Greater and better knowledge of the aforementioned intangible resources would make their management more accurate. Today, the key to competitiveness lies in the people who direct the different fields of action of companies. Therefore, the changing environment where they evolve determines the new demands in terms of knowledge, skills, and the abilities of workers. In this context, human capital is an essential element for the survival of the company, and it represents a potential for greater efficiency (Becker and Gerhart, 1996; García-Merino et al., 2008; García-Zambrano et al., 2018; Veselinović et al., 2022; Murugan et al., 2023). Therefore, the main objective of this research work is to establish a theoretical model that shows the relationship between the proactive management of human competencies and business results in Spanish companies. Specifically, we analysed the influence that investment in employee training has on the business sustainable value.

2. Training as a representative value of human capital

Human capital is a set of capabilities, skills, knowledge, and competencies that the worker has acquired from the company through experience and training. Without the existence of human capital, the creation of competitive advantages within the company would not be possible. Although the company has cutting-edge technological elements or material, elements that give economic value to the company, without qualified personnel for the execution of the said resources, these alone will not increase in value within the company. Human capital represents one of the fundamental elements for competitiveness to exist in the organizational field. Many authors (Murugan et al., 2023; Štaffenová and Kucharčíková, 2024) consider human capital as the most important dimension of intellectual capital to generate value for the company. Nowadays, the key to competitiveness lies in people. Therefore, employee training is essential since various studies consider employee training as a key factor of human capital (Bassi et al., 2002). As a concept, training is the education received to be able to acquire general and specific knowledge whose purpose is to put it into practice. Therefore, preparing employees through continuous training is a key factor for companies today. To deal with it, the company must train all personnel from the highest to the lowest positions. Training is one of the essential factors determining organizations' effectiveness. Several studies (García, et al., 2008; García-Zambrano, et al., 2018) consider the employee training as a critical representative factor of human capital. Improving the quality of people and the organization will not necessarily increase shareholder value. The success of any human resources strategy, specifically a training activity, should be measured by what contributes to the achievement of the organization's stakeholders. Training should not be an ultimate goal but rather a means to improve the competitiveness of organizations. Therefore, it is necessary to consider that the investments made in workers via training will have an impact in the near future, and the improvement in results will not be immediate (García, et al., 2008). Authors such as Lev et al. (2005), and Yang and Lin (2009) indicate that it is necessary to take into account more than one year in the training variable due to the delayed effect it can have on the value of intangibles; that is why in our study the training is cumulative. Therefore, our study proposes a theoretical model that analyses the impact of investment in employee training on business results.

3. Proposed model: Relationship between investment in training and intangible value

As proposed by Lev et al. (2005), we present a simple linear regression model that relates the influence of human capital through investment in worker training and the value of the organization's intangibles. In our model, the variable X refers to the investment in accumulated training, and the independent variable Y takes the value of intangibles as a reference. Thus, the main objective of our model is to verify whether investing in human capital through employee training really increases the company's intangible value. Likewise, we consider the variable total assets in the Balance Sheet item and the net worth in the profit and loss account to be able to use it to avoid size biases among the participating companies. Furthermore, we have taken the difference between the market value (stock market value) and the company's net accounting equity (the result being divided by the assets to avoid size biases) as a representative variable of intellectual capital). The authors Yang and Lin (2009) point out that there is a delayed effect of investments made in human capital on the value of intangibles. Therefore, in our model, we have not considered investments in training in year t, but rather those made in year t-1 and disbursements in previous k years.

Therefore, the proposed model would be the following:

$$VI^*_{t=1} = f(\sum_{t=0}^n CF_{t-1}) + \tilde{\varepsilon}_t \quad (1)$$

Where:

VI*_t: VI_t / VA_t

VI_t: Intangible value of company at period t.

VA_t: Value of actives of the company at period t.

CF_t-1 : IFA t-1/ VAt

IFAt-1: Accumulated investment in employee training during the three k periods.

ε_t : Error in t.

In this way, equation (1) collects the delayed impact of disbursements in employee training investment in the years before t. Therefore, the equation includes the impact of k years on the future value of the company's intangibles.

4. Conclusions

In this work, we propose establishing a model that relates the importance of investment in forming human capital through the influence on intangible future values. This research exposed a theoretical framework of the main intangible elements, distinguishing the difference between assets and intangible resources. We have studied human capital with its particularities, among which the impossibility of appropriating it stands out, that is, the human resource can leave the company at any time because there is no legal link to it, more beyond your employment contract, which can be terminated, practically without penalties in the vast majority of situations. This is why it is important to retain talent, a resource that must be trained to make it increasingly interesting to keep it within the company. In our case, we consider a maximum limit of 3 years since training depreciates quickly, as we have verified. After that, we established the representative variable of human resources, and we considered the intellectual capital variable as the difference between the market value (stock market value) and the accounting net worth of the company. Finally, we propose a linear regression model that relates the investment in employee training in three times before t, with the intangible value of the companies taking t as the base year. As future lines of research, it would be interesting to apply the proposed model to several companies in several countries to obtain more conclusions from the proposal.

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