An innovative model for measuring intellectual capital

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Abstract

Measuring intellectual capital became a main research area in the 1990s. The importance of intellectual capital comes from the fact that traditional accounting systems do not reflect reality for managers or investors in such a way that they understand how their resources – many of which are intangible – create value in the future. Moreover, evaluation tools provided by them are becoming less relevant and less suitable for measuring the value of intellectual capital for companies. The purpose of this paper is to design a measurement model which would provide a good tool for enterprises to manage their intellectual capital and to create competitive advantages.

Keywords: Model, measuring, intellectual capital, human capital, customer capital;

1. Introduction

Over the past several years there have been intensive discussions about the importance of intellectual capital within our society. The intellectual capital is promoted as an important and necessary factor for organizational survival and maintenance of competitive strength (Draghici, 2013). To remain at the forefront, organizations need a good capacity to retain, develop, organize, and utilize their employees’ capabilities. Intellectual capital appears to be regarded as increasingly important features for organizational survival. In this context it has to be created a model that could register, analyze and evaluate intangible assets because the accounting - financial perspective is not sufficient. Furthermore, this model of measuring intellectual capital must allow deep analysis of organization

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performances (under the intellectual capital perspective) in order to identify potential opportunities for increasing competitiveness.

In order to properly measure and manage intellectual capital there are a number of principles that should be observed (Stewart, 1997):

- To create and develop? intellectual capital organization should promote teamwork, develop network and communities of practice
- Organizational wealth is created around the skills and talents of employees. To manage these resources the organization has to find talent, to activate them, invest in them and to propose measures for their preservation
- Structural capital should be used to develop those intangible assets with which the organization can create competitive advantage
- Organizations must change the concept of knowledge collection just for the sake of gathering information Concept in the organization must be oriented to collect the knowledge, the information they need / the basic information
- Using knowledge should be made custom. Mass production will not generate high returns
- Each organization should reconsider chain, string, flow of information that can be found in the field of work, and decide to exploit the crucial information, crucial in its own purpose

In order to streamline the process of measuring and managing intellectual capital and to fulfill the principles listed above we built a model for evaluating intellectual capital necessary to respect concepts of intellectual capital sharing elements between the organization and other stakeholders.

2. A review of the available IC measurement models

Currently there are a variety of proposals for models, highlighting the importance of intellectual capital and to quantify the value of many of these data being experimental and thus some inherent shortcomings. In other words there is no generally accepted theoretical model for measuring intellectual capital of an organization. Research to evaluate intellectual capital of organizations have resulted in the emergence of a large number of models and proposed procedures. Some models focus primarily on financial metrics and offer a restricted notion of knowledge assets. Others take a more holistic view but require subjective judgment in determining a composite index that may be used for objective comparisons.

The most popular measurement models as well as the most widely used or just the easiness of their applications of all nonfinancial measurement methods are: Balanced Scorecard, Skandia Navigator and Intangible Assets Monitor.

Balanced Scorecard (BSC)

After a multi-year, multi-company study sponsored by Harvard Business School, Kaplan and Norton suggested that managers need a multi-dimensional measurement system to guide their policy making and proposed using what they called a “balanced scorecard” approach to performance measurement. It was the first time that the company was encouraged to measure financial and non-financial factors, including the customer perspective groups, the internal business process and the learning and growth perspective, and to link all these measures in a coherent system (Bontis, 1998).

Over the past decade, the balanced scorecard has evolved from being a measurement framework to being a strategy implementation tool. It represents a set of cause-and-effect relationships among output measures and performance drivers in the four perspectives (Kaplan & Norton, 1996):

- Financial measures: how do we look to shareholders, for example, cash flow and profitability
- Customer measures: how do our customers see us, for example, price as compared with competitors and product ratings
- Internal process measures: what must we excel at, for example, length of cycle times and level of waste
Learning and growth measures: can we improve and create value, for example, percentage of sales derived from new products.

Today, Kaplan and Norton stress the importance of visualizing causal relationships of measures and objectives. These are essentially communication tools that visualize an organization’s strategy and the processes and systems needed to implement it.

Although Kaplan and Norton insisted that companies should select their own measures, many have criticized the BSC model for being too limited. The BSC, however, considers employees as unimportant, overlooking the significance of knowledge management as a critical success factor of the new economic entity and as the key to its long-run survival. The BSC is merely supplementary in balancing the traditional perspectives by adding non-financial perspectives.

Skandia Navigator

Skandia appointed Leif Edvinsson as director of Intellectual Capital. Edvinsson developed a dynamic and holistic IC reporting model named the Navigator. It reflects four key dimensions of its business (Edvinsson, & Malone, 1997):

- Financial focus
- Customer focus
- Process focus
- Renewal and development focus

At the heart of these is human focus, which drives the whole Skandia Navigator mode. is an important tool. Other companies have relied extensively on Skandia’s Navigator to value their R&D and patent process. However, because it relies on a balance sheet to reflect the monetary value of a company’s IC, Skandia Navigator neglects many contents of IC which play important roles in creating value, such as a company’s culture, organizational learning and an employee’s creativity. In addition, among the more than 100 indices recommended in the Skandia model, there may be some mistaken assumptions. For example, employees showing up for work and sitting in front of their computers do not necessarily mean they are investing knowledge which can be transformed into their company’s competitive advantage, so Skandia’s structural capital variables, including the number of possessed computers, can be criticized (Husman, & Goodman, 1999). That is to say, the Skandia Navigator needs simplification and readjustment.

Intangible Assets Monitor

Intangible Assets Monitor was developed by Eric Sveiby and defines three types of intangible assets that account for the book value-to-market value discrepancy in the valuation of a firm. The ‘residual’ that is not accounted for by the book value is attributed to individual competence of employees, internal structure, and external structure (Sveiby, 1997). While Skandia Navigator treats culture and the management philosophy of the organization as a part of human capital, Intangible Assets Monitor classifies them under the internal structure. With its primary emphasis on people, this model is based on the premise that people are the only true agents in business and all aspects of structure, internal and external, are embedded in human actions. Application of this model is very context-specific and the indicators are chosen as polar descriptors (such as good or bad) that are specific to the contextual objectives that may make sense differently across organizations.

The most important measurement models for the intellectual capital are presented in the table below (table 1) considering several criteria: the model of intellectual capital, advantages, disadvantages and implementation in an organization. Table 1 provides a comparative overview of the measurement models discussed above. Summary description of each of the measurement models is given along with comparative analysis about their strengths and weaknesses. The comparison helps in determining the suitability of available models for private and public sector contexts of holistic development.
Table 1. Analysis of the model of measuring intellectual capital

<table>
<thead>
<tr>
<th>Model</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC</td>
<td>Attention to the needs of the stakeholders</td>
<td>Weak financial analysis</td>
<td>Gorenje</td>
</tr>
<tr>
<td></td>
<td>Takes into account interrelations</td>
<td>Rigid model</td>
<td></td>
</tr>
<tr>
<td>Skandia Navigator</td>
<td>Incorporates financial elements</td>
<td>It is difficult to apply the same methodology to different types of capital and their relations</td>
<td>Skandia</td>
</tr>
<tr>
<td></td>
<td>Can be adapted to any company</td>
<td>Does not analyse synergies between the areas</td>
<td></td>
</tr>
<tr>
<td>Intangible Assets</td>
<td>Provides a comprehensive image of the intellectual capital</td>
<td>Do not give a numerical value to intellectual capital.</td>
<td>Celemi</td>
</tr>
<tr>
<td>Monitor</td>
<td>Relations with suppliers and other key stakeholders are taken into account</td>
<td>There may be difficulty in choosing appropriate indicators</td>
<td></td>
</tr>
</tbody>
</table>

3. A innovative model to measuring intellectual capital

All of the above intellectual capital measurements contribute a lot to measuring intellectual capital from diverse points of view, but unfortunately, methods of measuring intellectual capital have been slow to develop.

The proposed model has the following characteristics:

- Relevant to final users
- Provide useful management information
- Is operational and manageable
- Is easy to understand
- Refers to the cognitive areas of strategic importance operating system

The significance of this IC measurement model lies in its ability of providing timely necessary information for the manager of a company, which thus enables him/her to modify their strategies of IC management according to the specific situation, to obtain and make full use of knowledge, and to achieve long-term competitive excellence.

The model is represented by 3 components: human capital, structural capital and customer capital. Each component corresponds to the specific indicators shown in Figure 1. Should be noted that intellectual capital evaluation model is a dynamic model, therefore it is not completely stabilized. Indeed this is one of the advantages of the model: dynamic or interactive proves to be very good in turbulent business context.

![Fig. 1 A proposed model for measuring IC](image-url)
4. Case study

In order to demonstrate the feasibility of the proposed model of the IC evaluation, a case study in the organizational context of a constructions company (so-called X Company) was done. This organization is acting as a construction and it was founded in 2006 in Romania. Its turnover is of 56.000.000 EUR and it has 440 employees (data available in the end of 2012).

Human capital

Inside the company there is an extended network of culture in the organization, employees share the values and practice as a group. Culture includes mission that is shared by all employees. The company has a high integrity, strong reliable, highly effective leadership, customer orientation and also showed support for innovation. In the company there is an exchange of ideas like instrument called the base portfolio of projects. Extremely valuable is the existence of a network that allows contact with various partners called X, which is high-standard software for internal and external communication.

The company presents a compensation policy based on performance evaluation team level and individual. At company X each client is seen as an entity that requires a team solution. In the company work team focuses on external as well as on internal customers.

Structural capital

The company uses new technologies to capture, store and use all its processes, because a platform called x. This information can be accessed at any time by different partners (employees, customers, suppliers.). Through this platform, employees register knowledge, ideas, contacts, information. The organization has some type of partnership, helping them to create value for the organization by sharing know-how. They also certify that they have made investments in infrastructure development, which helped simplify organizational processes. Within the organization there is a reporting system for internal complaints from employees of the organization, which helps to keep track for improvement. The company was awarded professional in quality management in construction innovation and competitiveness.

Customer capital

The company has specialized staff to oversee the competition and to control the new plowing in terms of innovation, but not engaged in formal market research. The company recently entered new markets with new products/services such as rental properties and cleaning services. Company Internationalization part of current strategies is through partnerships. At company X all ideas and suggestions from customers and employees are applied in strategies in order to increase market efficiency.

5. Conclusions

It can be seen that within the studied organization every time an employee acquires new knowledge shared with rest of the team, being part of the culture and regulations of the company. The value of the company generally refer to: focus on the customer, employee development, its behavior as an entrepreneur and innovator acting through teamwork and sharing knowledge. The organization is encouraging talents of each employee by providing professional training related to employee skills. The employees who pass on their individual skills are rewarded financially and professionally. The company encourages employees to be innovative and also has a policy for retaining talent. All results of the case study lead to the conclusion that the success of the organization lays in the high degree of investment and recognition which has intellectual capital.

References


