

Towards Identifying and Disclosing Intellectual Capital

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ABSTRACT

Intellectual capital (IC) is one of the most valuable assets of firms, which has a significant role in success and wealth creation of the entities. Although these assets do not meet recognition criteria of accounting standards and are not reflected in financial statements, but they exist and the evidence indicates that they can affect managers, investors and other stakeholders' decisions. It is expected that companies have incentives voluntarily report information about IC, due to the benefits thereof. Moreover because of the latest changes in the conceptual framework, we can expect acceleration in the movement towards recognition, measurement and disclosure of IC. In this article first we present the definition and the most important elements of IC, and then different ways of measuring this asset in accounting will be discussed. In rest of the paper incentives for disclosing IC will be presented, in order that the attention of the standard setters is attracted to the latest developments in this field and also the attention of investors becomes focused on this important asset of companies.

Introduction

Nowadays, organizations pay special attention to areas with added value, areas like Advertisement, R&D, developing commercial brands, and educating the personnel (Edvinsson and Patriek; 1996). IC is one of the sources that create wealth for the entity. Some of the experts claim that the most important asset of an organization is its IC. Nick Bontis, (Director, Institute of Intellectual Capital Research, Associate Editor, Journal of Intellectual Capital), states "Intellectual Capital is the currency of the new millennium. Managing it wisely is the key to business success in the knowledge era" (Taliyang et al; 2011).

The concept of Intellectual Capital

IC, a term first introduced by economist John Kenneth Galbraith in 1969, refers to the difference between an organization's market value and book value. Many researchers have come to regard IC as a firm's primary means of creating competitive advantage. The abstract and dynamic nature of IC makes it difficult for scholars to define it. Moreover, Guthrie even notes that some consider IC and intellectual assets or intangible assets as synonyms. Previous studies indicate that IC is the product of dynamic business operation processes, and is closely related to knowledge management or organizational learning. Some researchers also contend that accumulating IC is beneficial for creating competitive advantage or business value. Following the above-mentioned literature, this study defines IC as the total capabilities, knowledge, culture, strategy, process, intellectual property, and relational networks of a company that create value or competitive advantage and help a company achieve its goals.

Bontis defines the IC as a collection of intangible assets which is created by the organizations' performance and can create value for the organization. IC is defined by Roos et al. as "all non-monetary and non-physical resources that are fully or partly controlled by the organization and that contribute to the organization's value creation (Rose et al; 2005). Kaplan & Norton believed that those intangible assets which are out of the balance sheet including human capital and capital intelligence are IC. These assets are not interchangeable

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and also at present there is no possibility for monitoring, controlling and determining the amount of these assets. (Kaplan and Norton; 1996).

The Elements of Intellectual Capital

Like IC itself, there is no unified definition for elements of IC. However IC has been categorized into three core components: human capital, Structural Capital and Customer (relationship) Capital (Abdullaha and Sofiana; 2012).

Human capital includes knowledge, professional skills and experience, expertise, educational level and creativity of employees. The primary and the main goal of human capital is innovation in goods and services and improving the business processes. The most important indicators of human capital include professional competence and expertise of key staff, educational level, experience, number of employees with relevant background and the exact distribution of responsibilities in relation to customers (Abdullaha and Sofiana;2012).

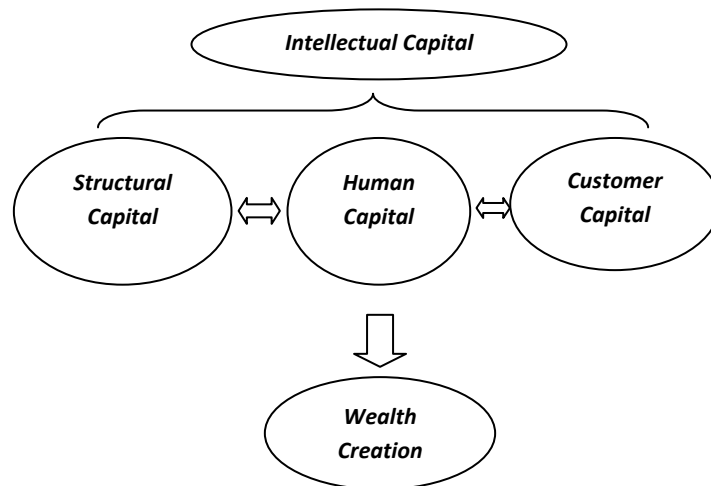


Figure 1

Structural capital includes innovation capital, databases, software systems, distribution networks, organizational charts, corporate culture, strategies and policies. Structural capital is the knowledge which remains in the organization at the end of the day and it belongs to the entire firm and can be produced again and can be shared with others. This kind of capital is created by competitive advantages of a company and by the abilities of its staff. It includes some factors like popularity, experience, products and services or even the production methods.

Relational capital includes marketing channels, customer relationships, relationships with suppliers, customer loyalty, governmental and industrial networking, intermediaries and partners. Relational capital includes items such as value of advantages owned by the company, its relation with people and other organizations, market share, keeping or losing the customers and also net profit per customer. As we can see in Figure 1, IC finally will lead to wealth creating for the company.

Methods of Measuring Intellectual Capital

The definition of IC has always been ambiguous and even now there is not a publicly acceptable definition (Taliyang et al ;2011). This weakness and failure in identifying IC caused that this valuable asset does not meet qualifications necessary for being recognized. However we should mention that although this asset is not reflected in the balance sheet, but it exists. Because of the lag in recognition of these assets, they are included in profit measurement. Indeed the periodic performance of a company contains the current value of these assets (Scott; 2012). In other words, the weakness in recognizing the relevant circumstances and establishing measurement criteria for this asset has caused that this asset would not be reflected in balance sheet at present.

It should be noted that informed investors will gobble any relevant information and consider it in their decision-making. The efficient market hypothesis expresses the users regardless of where and how

information can be obtained will gather and analyze the information. Also the Decision Theory indicates that individuals consider relevant information in their decisions (Scott; 2012). Some of the researchers show that analysts and managers of investment funds are willing for information about IC which can affect their decisions and valuations of other companies and they do use this information for decision-making (Li et al; 2012). It is clear that the non-ideal situation is dominant in real world so it is not possible to prepare completely correct and proper(relevant and reliable) financial statements; therefore accounting should make a trade-off between information characteristics like relevance and faithful representation. Of course a good and suitable information system which leads to more correct decisions can help to approach an ideal condition (Scott; 2012).

Many of experts believe that the research about IC will be one of the most important future areas of studies in accounting research (Taliyang et al; 2011). Some researchers (e.g. Brennan, 2001. Beattie et al., 2004. Beattie & Thomson, 2007. Li, Pike, & Haniffa, 2008. Striukova, Unerman, & Guthrie; 2008) have studied IC itself but some others have focused on IC disclosure. These researchers generally have shown that although the information disclosure related to IC is not much at present; however, according to the importance of this knowledge and the role of information in success of firms, in the future we will see movement towards disclosure of this information (Li et al; 2012). Taliyang et al. investigate the factors affecting the disclosure of IC in Malaysia. They find that about 72% of the sample under investigation is disclosing information about IC. Some studies also show that IC can be used as an indicator to predict financial performance of the companies (Taliyang et al; 2011).

Various methods have been proposed to measure IC that is optionally used by individuals and firms. Each one focuses on one subject and measures IC according to required information. Each of these methods has its own advantages and disadvantages. Today there is no way to truly measure IC (Berglund et al; 2002). The subject which is being studied has a subjective aspect and according to Wolk and colleagues (2013): "There are different perceptions of reality". Aside different perceptions of reality, subjective nature of IC has also a significant impact on the measurement problems.

The first serious activity on the measurement and reporting of IC refers to a Swedish company called Skandia. In 1985, the company for the first time developed an internal reporting about its IC. In 1995, the company presented and disclosed this information along with its financial reporting. The company's IC measurement model called "Skandia Navigator". This model was also used by businesses and other organizations while changing by the passage of time. Today this method is one of the methods used for measuring IC. Methods of measuring IC can be placed in four main categories (Berglund et al; 2002).

1. Direct IC method: In this method, the monetary value of IC is measured by identifying the various elements. At first the elements of IC and their values are being identified and calculated; in fact, the total value of identified elements is the IC. This method is the most complex and the most accurate method of measuring IC. This method gives more details to the analysts and users. The main problem of this method is that its results cannot be linked to the financial results.
2. Market Capitalization Method: In this method difference between market value of the company and equity of shareholders which has been adjusted by inflation or replacement cost will apply into IC value. This method provides less detail to analysts and users. It should be noted that this method focuses on market mechanisms so distortions and biases are possible especially in inefficient markets where prices are not transparent and reliable. Although the existing rules and regulations haven't been obligated to provide the required information including disclosing numbers in an inflation adjusted way, however in this method the users can calculate and measure the information themselves. This method is somewhat provides the basis for comparability between companies and between various industries.
3. Return on Assets method: In this method ROA for several years will be calculated for the firm and then compared with average ROA in industry. Positive difference indicates that the company has IC in comparison with other companies in the same industry. In order to calculate IC, average value of the company's tangible assets is multiplied by the mentioned difference so that it gives the average annual income of intangible assets. By dividing this excess profit by average cost of capital or by interest rate of company we can estimate the value of IC. This method like the market capitalization method focuses on financial figures. Although this method and market capitalization method are not foolproof, auditability and recalculation are among advantages of these two.
4. Scorecard method: This method due to the usage of multiple dimensions is similar to the Skandia's method, which was explained in the previous section. Scorecard for measurement of IC considers four dimensions: finance, customer, internal business processes and learning and development.

The first three methods is called monetary valuation methods of IC and the fourth one is called non-monetary valuation method of IC (Berglund et al; 2002).

Incentives for disclosure of intellectual capital

Accounting and financial reporting has always been associated with controversial issues; topics that have been discussed for a long time with a lot of debates on them. Just take a look around the list of unsolved problems: allocation of tax, the amount of retirement expense and liability, depreciation methods, different approaches to business combinations, costing methods including absorption costing, direct costing, variable costing, Super-Variable Costing or Throughput Costing, ABC, TDABC, RCA are among of argued problems. There are several issues without consensus in accounting. IC is one of the topics which there are different viewpoints about them. In this part most important one of them including mandatory disclosure, voluntary disclosure (free market advocates) and current status of IC will be presented. Fama and Jensen (1983) argued that the separation of ownership and control in the modern firm creates information asymmetries between the managers and the outside investors. This will increase agency costs such as reduced liquidity of the company's shares, management reputation, and higher cost of capital (Fama and Jensen; 1983). Rise of agency costs stimulate managers to voluntarily disclose information about IC. Palepu (2001) suggest that more disclosure will reduce information asymmetry and consequently results in lower agency costs. Aboody and Lev (2000) argue that the information asymmetry between managers and investors is more acute for investments in IC than for investments in physical and financial assets, because IC is unique to specific firms and cannot be inferred by digging other firms. Additionally, unlike investments in physical and financial assets, reporting of IC is largely unregulated.

Lack of recognition and disclosure of IC can bring negative consequences including: 1) Increased likelihood of incorrect valuation of companies, 2) Increase in cost of capital, which in the context of IC, disclosure can reduce information asymmetry and investors and creditors will be induced to decrease expected rates that leads to reduction in the cost of financing and borrowing, and 3) without informing other investors, managers' utilization of information and decisions related to intangible assets, increases the likelihood of trading based on inside information and creates moral hazard (Mouritsen et al.;2003). In fact, the voluntary disclosure can reduce consequences of information asymmetry i.e. adverse selection and moral hazard so resource allocation can improve in the way that fosters social benefits (Scott; 2012). Although there are no requirements and regulation regarding the presentation and disclosure of IC, evidence suggests that information on this matter is voluntarily presented. The voluntary disclosure of IC information occurs for various reasons; including providing favorable conditions to predict the future state of the company and the company's intrinsic value, for reducing the information asymmetry and lowering the cost of capital and agency costs, and to improve the company's ability for funding. Considering the mentioned issues and economic consequences of voluntary reporting of IC, we come to the conclusion that this concept is rooted in economic concepts and in the economics of information. Even if we say that voluntary disclosure of this information is in order to gain economic benefits, it is not a false statement at all (Li et al.; 2012).

In this regard, some believe that because of the importance of disclosing this information, it is better to pass some rules and regulations for this purpose. These groups want to have a so-called regulated market. Advocates of this argument are mainly having two reasons: market failure and possible conflict between open market aims and social goals (Wolk et al.; 2013).

Market failure refers to the fact that free market will not be able to meet the desired objectives. Companies are suppliers of information exclusively. On the other hand considering the public good nature of information and accounting reports and taking into account the fact that firms cannot get any price for the information or the services, therefore there is a possibility that a suboptimal amount of data be produced. These terms are subject to market failure in which the free market would not be able to meet needs of users (Wolk et al.;2013) and in context of this article, information of IC will be reported much less than is required.

If accounting information is a public good, firms won't have much incentive to provide this information. Regulated market advocates have argued about private contracting opportunities. In respond to private contracting opportunities some debate that mandatory disclosing in comparison to private data gathering will produce returns based on the economies of scale. In other words, the cost of providing this information

would be lower for the society. In the other hand, market may not be able to meet the targets of the society. Perhaps the society requires some information from companies and if they wouldn't be mandated they wouldn't have enough incentive for developing this information (Wolk et al.; 2013). For example, the community may be seeking information on human capital, but firms don't have an incentive to provide this information; in this case it is not possible to meet goals and needs of the community (this arises from stakeholder theory and social responsibility accounting), except by regulating this domain.

The main issue here is how we deal with it? Markets based on regulation or non-regulation? We will choose depend on our perspective. It should be point out that we now live in a time of regulation (Scott; 2012).

Because information about IC is not as other financial information, providing information about IC is costly for financial system at the moment. Considering above discussion, it is expected that mandatory disclosure of IC and regulated accounting and legislation will increase the comparability and reliability (Wolk et al.; 2013). Nevertheless this raises the important question of who is responsible for fulfilling the social goals and more important question is that who wants to determine the social goals and how?

Friedrich von Hayek, Nobel laureate and leading Austrian economist and philosopher, believed that the process of acquiring knowledge is through the open market and by all the participants. He argued that the acquisition of all knowledge is not something that can be done by anyone, any group or any specific foundation. For many years the best use of knowledge dispersed in society has been accomplished. The market is the only system able of doing that. According to Hayek's opinion, knowledge is so widespread that no institution is expected to fully identify the different needs of different groups (Hayek; 1945).

The next question that arises is that who should pay the costs of fulfilling goals and needs of the community? In any case if mandatory disclosures satisfy cost-benefits considerations, then setting rules and regulations are justified (Scott; 2012). But how calculate the benefits and costs?

However, in the absence of mandatory disclosures there would be still incentives for voluntary disclosure of information. In this situation Signaling Theory is prominent. Signaling theory states that when there is no disclosure requirement to provide information, why individuals have incentives for voluntarily reporting information (Wolk et al.; 2013). Companies try to provide information that reduces information asymmetry and its consequences. Signaling theory suggests that firms with more profitability will provide more and better data. Some studies have shown that voluntarily released information is considered by the market as good news so this is an incentive for voluntary disclosure of information. Even if the company's situation is bad, in some cases, not providing information can be considered as worse (Wolk et al.; 2013). It means that when a company has IC then it has the motivation to communicate this information to the market. Although there is no obligation in this regard, and also companies which have less IC have the incentive for voluntary reporting of information too, because the market considers non-disclosing of information as bad news. Therefore, disclosure of IC is actually a dominant strategy.

In current conditions, recognition of IC has relevant circumstances but because of the inability of standard-setters to identify this circumstances, inevitably they follow rigid uniformity (Wolk et al.; 2013). Standards make it clear that the expenses related to these assets which are generally R&D expenditures, should be expensed in the period of occurrence (Scott; 2012). However, some researches show that the capital market considers these expenditures as assets and contemplates them as good news and accordingly reacts to them. For example Sougiannis (1994) showed every dollar which is spent on R&D will increase the firm's value by an average of five dollars (Wolk et al.; 2013). It should be noted that although we cannot show IC, but these assets exist. IC makes the organization more profitable and in fact it can be reflected in the income statement in each period (Scott; 2012).

Towards Intellectual Capital Disclosure

Under IFRS an item is identified as an intangible asset when it meets three criteria. First, conform to intangible asset definition. Second, flow of its future benefits should be probable for the entity. Third, cost of it can reliably measure. In other words, the asset should be substantive. According to this standard, an asset can recognize a distinguishable criterion when it has the following conditions: it should be separable or it should be rise by contractual rights or by other legal rights, regardless of whether those rights are transferable or separable from a business unit or from other rights and obligations. Financial accounting

standards board in statement of financial accounting standard 142 (or ASC 350) argues that the intangible assets which are being acquired should be recognized by fair value; however intangible assets which are created within the entity are not recognized as assets and should be expensed in the period of occurrence.

FASB in statement of financial accounting concept No. 5 determines four criteria for recognition of an asset. So, an item and information about it should meet four fundamental recognition criteria to be recognizable and should be recognized when the criteria are met, subject to a cost-benefit constraint and a materiality threshold. Those criteria are:

1. Definition—the item meets the definition of an element of financial statements.
2. Measurability—it has a relevant attribute measurable with sufficient reliability.
3. Relevance—the information about it is capable of making a difference in user decisions.
4. Reliability—the information is representationally faithful, verifiable, and neutral.

All four criteria are subject to a pervasive cost-benefit constraint: the expected benefits from recognizing a particular item should justify perceived costs of providing and using the information.

As was stated earlier, IC is a topic that has recently been noticed. There is not even a clear and precise definition of IC, so the second and forth criteria are not meet, therefore IC could not be consider as an intangible asset on the balance sheet.

Due to the complexities of the business environment, providing relevant financial and operational information in the form of traditional financial statements will be crucial. For this reason, the importance of disclosure will be much higher in the future. In other words, we will see that disclosures to have a stronger role in the future (Wolk et al.; 2013).

It should be noticed that in September 2010, SFAC No. 8 superseded FASB Concepts Statements No. 1, Objectives of Financial Reporting by Business Enterprises, and No. 2, qualitative Characteristics of Accounting information. Among the major changes we can focus on basic qualitative elements change. In SFAC No. 2 reliability and relevance were two primary qualities but in SFAC No. 8 two fundamental qualitative characteristics are relevance and faithful representation.

This change can be viewed as a change in attitude and can be considered as a movement towards fair value and a different approach in measuring items and reporting the financial information. These changes in the conceptual framework are in response to changes in economic conditions and convergence with international standards. We should expect future changes for accounting and reporting standards, especially those that focus on representational faithfulness.

In fact in this new SFAC, focus on objectivity is mitigated. Maybe the paradigm in accounting is changing. We know that even in the purest of sciences i.e. physics, objectivity is under question. Now how we can expect in accounting, objectivity but all approached. Furthermore if lack of measuring tools is the reason that we don't disclose these substantial assets, Employees Stock Options can be noticed. Black-Scholes model by many reasons overvalue these options but FASB mandated disclosing information related to ESOs by this model. If we look retrospectively to this matter, we find out that law making is a gradual process and couldn't take place at once. But it is standard setter's duty to start this gradual process in IC at least by expressing a unique definition of IC to construct a foundation for this procedure.

Some researchers have argued that for achieving greater social benefits, we should sacrifice some reliability; in fact, it may be better to accept the low reliability quid pro quo some optimality, because benefits of this information outweigh the disadvantages of unreliability (Scott; 2012). It is expected that changes in the SFACs and related standards can provide the potential for moving towards measurement approach and also to accelerate the IC disclosure; however time will tell us how these changes will affect the identification and disclosure of IC. One of the factors that can speed this change in approach is the convergence of IFRS and FASB. As we know conceptual framework has a quasi-deductive approach, therefore moving towards fair value, which is associated with reduced reliability and increased relevance, will be harbinger of movement towards more usage of measurement in accounting and financial reporting and perhaps this change penetrates to the measurement of IC in accounting and causes a more appropriate and a better reporting of this asset.

Conclusion

IC is one of the firm's most important assets that can generate wealth for the organization. Several definitions of IC have been provided. Apparently the ability to create value and wealth for the organization is among of the most common criteria which is explicitly being referred to in some definitions and is implied in some others. In fact IC is an asset and one of the most important features of assets is the value and economic benefits they have. However it must be confessed that at the moment accountants are unable to measure the benefits of IC in a precise and reliable way. IC is an asset that despite the fact that it has benefits for the company in the future, but due to the lack of some criteria of recognition is not reflected in the financial statements. However, informed investors are searching for this information and firms can disclose such information voluntarily to reduce information asymmetry and in order to get benefit from advantages such as lower cost of capital. It is expected that the companies report this information properly and provide a basis for a more efficient market that helps make more efficient decisions.

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