INTELLECTUAL CAPITAL

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Key Words:
intellectual capital, knowledge, human capital, structural capital, external capital

Abstract

In the millennium less people will do physical work and more people will do brain work. This is intellectual capital. It doesn't appear on the company balance sheet but it has more value for organisations than physical assets. Economic wealth is driven more by knowledge and information than the production process.

While past economies depended on use of land, natural resources, equipment and capital for the creation of value, our information economy will depend on application of knowledge.

Intellectual capital has also been defined as the difference between a firm's market value and the cost of replacing its assets. Components of intellectual capital consist of human capital, structural capital and external (customer) capital.

If managers manage knowledge effectively, their organization will enhance their intellectual capital.

Introduction

In the millennium less people will do physical work and more people will do brain work. This is intellectual capital. It doesn't appear on the company balance sheet but it has more value for organisations than physical assets. Economic wealth is driven more by knowledge and information than the production process.

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The Economics Institute of Washington, D.C., in its recent study on human intellectual capital, concluded that, "The economic value of the nation's productivity depends more upon employee skills and knowledge and business problem solving aptitude than it does upon the market value of the firm's commercial output." Most experts agree. In the new millennium, intellectual capital will be the primary resource and driver of our information economy[1].

While past economies depended on use of land, natural resources, equipment and capital for the creation of value, our information economy will depend on application of knowledge.

Knowledge is very important source for people, firms and countries. Managing knowledge and intellectual capital create new source of competitive advantage. The fortunes and values of firms can increase or decrease depending on how well they create, capture, and leverage their knowledge.

Intellectual capital encompasses the models, strategies, unique approaches and mental methodologies organizations use to create, compete, understand, problem-solve and replicate[2].

1. Definition

There are a lot of definitions of intellectual capital:

Intellectual capital has also been defined as the difference between a firm's market value and the cost of replacing its assets. It is those things that we normally cannot put a price tag on, such as expertise, knowledge and a firm's organizational learning ability[3]. Market value equals book value plus intellectual capital, with book value usually only the tip of the iceberg of wealth.

Intellectual capital encompasses much more than patents, copyrights and other forms of intellectual property. It is the sum and synergy of a company's knowledge, experience, relationships, processes, discoveries, innovations, market presence and community influence[4].

The most widely used definition of intellectual capital is "knowledge that is of value to an organization." Its main elements are human capital, structural capital, and customer capital. That definition suggests that the management of knowledge (the sum of what is known) creates intellectual capital[5].

2. Components of intellectual capital

Components of intellectual capital consist of human capital, structural capital and external (customer) capital. This classification is admitted in general.

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[1] Di Stefano Paul J, Kalbaugh G. Edward, Intellectual Capital, **Rough Notes**, 142 (7), Jul. 1999, p. 94-95.

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2.1. Human Capital

Human capital is defined as the knowledge, skills, experience, intuition and attitudes of the workforce. Intellectual capital can be increased by increasing the capacity of each worker.

Human capital is the knowledge, skill and capability of individual employees providing solutions to customers[1]. Human capital is the firm's collective capability to extract the best solutions from the knowledge of its people. It is important because it is a source of innovation and strategic renewal, whether it is from brainstorming in a research lab, daydreaming at the office, throwing out old files, re-engineering new processes, improving personal skills or developing new sales leads[2].

Individual competence is important for organizations. This is people's capacity to act in various situations. It includes skill, education, experience, values and social skills. People are the only true agents in business; all assets and structures, whether tangible physical products or intangible relations, are the result of human action and depend ultimately on people for their continued existence[3].

People create knowledge, new ideas, and new products, and they establish relationships that make processes truly work. Unfortunately, when people leave, they take along their knowledge, including internal, external, formal, and informal relationships[4].

Intellectual capital - the commitment and competence of workers - is embedded in how each employee thinks about and does work and in how an organization creates policies and systems to get work done. It has become a critical issue for six reasons[5]:

First, intellectual capital is a firm's only appreciable asset. Most other assets (building, plant, equipment, machinery, and so on) begin to depreciate the day they are acquired. Intellectual capital must grow if a firm is to prosper. A manager's job is to make knowledge productive, to turn intellectual capital into customer value.

Second, knowledge work is increasing, not decreasing. Service generally comes from relationships founded on the competence and commitment of individuals.

Third, employees with the most intellectual capital have essentially become volunteers, because the best employees are likely to find work opportunities in a number of firms. This does not mean that employees work for free, but that they have choices about where they work and, therefore, essentially volunteer in a particular firm. Volunteers are committed because of their emotional bond to a firm; they are less interested in economic return than in the meaning of their work. Employees with this mind-set can easily leave for another firm.

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Fourth, many managers ignore or depreciate intellectual capital. In the aftermath of downsizing, increased global competition, customers' higher requirements, fewer management layers, increased obligations, and pressures exacted from almost every other modern management practice, employees' work lives have not always changed for the better.

Fifth, employees with the most intellectual capital are often the least appreciated. Some studies have correlated front-line employees' attitudes to a firm with customers' attitudes to the same firm.

Sixth, current investments in intellectual capital are misfocused

Education and training professionals understand how people learn, share knowledge, and work together. They also understand how an organization's culture can affect learning initiatives, how hard it is to change an organization's culture, and how human potential can be tapped through wise knowledge management[1]. Learning will be embedded in the technologies that serve us, entertain us, and help us do our work. Learning by doing, even if in simulation, will be the rule instead of the exception. The activity of teachers and the passivity of learners will be an ancient mode of learning. Learning will be a basic workplace skill[2]. Learning suggests ongoing, never-ending and always changing. It is the foundation of adaptability and innovation.

2.2. Structural Capital

This consists of a wide range of patents, concepts, models, and computer and administrative systems. These are created by the employees and are thus generally 'owned' by the organisation, and adhere to it. Sometimes they can be acquired from elsewhere. Decisions to develop or invest in such assets can be made with some degree of confidence, because the work is done in-house, or bought from outside. Also, the informal organisation, the internal networks, the 'culture' or the 'spirit', belongs to the internal structure. The internal structure and the people together constitute what we generally call the 'organisation'[3].

Structural capital is the firm's organizational capabilities to meet market requirements. It involves the organization's routines and structures that support employees' quests for optimum intellectual performance and, therefore, overall business performance. An individual can have a high level of intellect, but if the organization has poor systems and procedures by which to track his or her actions, the overall intellectual capital will not reach its fullest potential[4].

According to Van Buren, structural capital consists of innovation capital (the capability of an organization to innovate and to create new products and services) and process capital (An organization's processes, techniques, systems, and tools)[5].

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Structural capital, consists of an organization s strategies, internal networks, systems, databases, and files, as well as its legal rights to technology, processes, inventions, copyrights, trademarks, trade secrets, brands, and licenses. Structural capital improves when organizations invest in technology and develop processes and other internal initiatives[1].

The structural capital of a firm consists of four elements[2]:

- **Systems** - the way in which an organization's processes (information, communication, decision-making) and outputs (products/services and capital) proceed.
- **Structure** - the arrangement of responsibilities and accountabilities that defines the position of and relationship between members of an organization.
- **Strategy** - the goals of the organization and the ways it seeks to achieve them.
- **Culture** - the sum of individual opinions, shared mindsets, values, and norms within the organization.

There is a stronger linkage between strategy and culture than is generally assumed. In the beginning, an organization's culture acts as a powerful filter on its perceptions of the business environment and, thus, contributes to the shape of the business strategies that are adopted. Later, when specific strategies are in place, they cannot be successfully implemented if the culture does not shape the organization's behavior in ways that are congruent with these strategies.

The largest barrier to success in implementing change is the lack of fit between strategies and the organization's structures and culture. Organizations often respond to their business environment by adopting new strategies and developing the structures and processes to make them work. Because the "culture" element tends to be more implicit, however, it is usually ignored. Management has relatively little understanding of how to intervene in order to make the necessary culture changes. Ultimately, the competitive advantages meant to be derived from new strategies and the accompanying organizational changes will not be realized if they are not supported by an organizational culture that is appropriately aligned[3].

An organization with strong structural capital will have a supportive culture that allows individuals to try, fail, learn and try again. A culture that unduly penalizes failure, will have minimal success[4].

2.3. External Capital

External capital is also named relational capital and customer capital.

External - relational capital refers to the organization's relationships or network of associates and their satisfaction with and loyalty to the company. It includes knowledge of market channels, customer and supplier relationships, industry associations and a sound

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understanding of the impacts of government public policy. Frustrated managers often do not recognize that they can tap into a wealth of knowledge from their own clients and suppliers. Understanding better than anyone else what customers want in a product or a service, is what makes someone a business leader as opposed to a follower. Customer and supplier loyalty, target marketing, longevity of relationships and satisfaction are all measurable elements of this form of intellectual capital[1].

External structure consists of relationships with customers and suppliers, brand names, trademarks and reputation. Some of these can be considered legal property[2]. Coca-Cola, for instance, is the world's most valuable brand name, worth about US$39 billion. But customer capital will show up in complaint letters, renewal rates, cross selling, referrals and the speed with which phone calls are returned[3].

External capital, defines an organization's vital, external relationships. The components of external capital include[4]:

Customer capital-the loyalty of valuable customers created by understanding their needs and meeting them consistently

- **Supplier capital** - the mutual trust, commitment, and creativity of key suppliers.
- **Alliance capital** - reliable and beneficial partners.
- **Community capital** - an organization's capabilities and reputation in its surrounding community.
- **Regulatory capital** - knowledge of laws and regulations as well as lobbying skills and contacts.
- **Competitor capital** - critical understanding and intelligence about competitors.

These relationships can only be managed; they cannot be controlled. Improvement in external capital involves looking outside an organization's boundaries to such things as developing relationships and trust with customers, suppliers, and surrounding communities.

3. Managing Intellectual Capital

The current debate on intellectual capital is set in the context of a changing model of management and organization structures. It is said that organizations are moving from command and control to delegation, empowerment and coaching. Through this, everyone in the organization has an opportunity to shape the way it works. It is the role of management to harness and maximize that potential[5].

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[1] Bontis, Nick, There's a Price On Your Head: Managing Intellectual Capital Strategically, **Business Quarterly**, 60 (4), Summer 1996, p. 40-47.

[2] Sveiby, Karl-Erik, Intellectual Capital: Thinking Ahead, **Australian Accountant**, 68 (5), Jun. 1998, p. 18-22.

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It's clear that managers who want to grow their company's intellectual capital must be able to expand intelligence, encourage innovation and exercise integrity. Indeed, these are the three core competencies of intellectual capital[1].

The challenge for managers is to develop the three core competencies of intellectual capital companywide. That's where dialogue comes in. Knowledge is created and transferred through conversation, and leaders must master the art of fostering a dialogue among team members.

Facilitate and train teams on knowledge creation and innovation. Conduct team-focused workshops to apply innovation skills to specific business challenges regarding revenue generation, quality, etc.

Coach specific project teams and sponsors on how to cultivate a better climate for innovation. Multiple-way conversations will help people address the top issues that surface during the innovation process.

Assess the culture for intelligence and innovation. Conduct a "culture audit" to test for the values, mind-sets, behaviors and outputs of the innovative learning organization.

Reengineer specific parts of the culture. Develop innovative approaches to technology networking, organizational structure, performance appraisals, rewards, etc., to encourage greater intelligence, innovation and high-integrity relationships.

If managers manage knowledge effectively, their organization will enhance their intellectual capital. There are two levels of knowledge in intellectual capital: Explicit and tacit knowledge.

Tacit knowledge is the experience and intellectual creativity and learning that rests with the human resources of the firm. Explicit knowledge is knowledge that can be codified into information and accessed and disseminated systematically[2].

Tacit knowledge takes a different form in each segment of a firm's intellectual capital[3]: In human capital, it is the mindsets of individuals their assumptions, biases, values, and beliefs. In customer capital, it is the individual and collective mindsets of customers that shape their perceptions of value provided by any given products or services. In structural capital, it is the collective mindsets of the organization's members that shape the culture of that organization, including its norms and values.

Knowledge utilization is a collaborative process. Whether between workers within a firm or in the transfer and utilization of knowledge between firms, knowledge-based approaches cannot succeed without effective collaboration[4].

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Managers who are interested in developing intellectual capital for their own organizations should follow these eight steps (derived in part from Thomas Stewart's work)[1]:

1. Make knowledge management a requirement for evaluation purposes for each employee in your organization - assign personal targets to intellectual capital development. For example, companies can have each employee aim to learn something that the organization currently does not know;
2. Formally define the role of knowledge in your business and in your industry -find and secure the greatest resources of intellectual capital;
3. Assess your competitors' and suppliers' strategies and knowledge assets - find and secure the greatest resources of relational capital;
4. Determine the extent of intellectual capital resources available to you from government and industry associations;
5. Classify your intellectual portfolio by producing a "knowledge map" of your organization - determine in which people and systems knowledge resides;
6. Evaluate the relative worth of the intellectual capital - use monetary values if at all possible, or company - developed indices or metrics;
7. Identify gaps you must fill or holes you should plug based on weaknesses relative to competitors, customers and suppliers; and
8. Assemble your new knowledge portfolio in an intellectual capital addendum to your annual report and continuously assess the development of your intellectual capital.

Intellectual capital is the source of inspired innovation and wealth production-the precursor for the growth of financial capital.

Leveraging intellectual capital - the sum of a company's intangible assets - requires an organization to become knowledge-based and to revise its performance measures accordingly. Market value equals book value plus intellectual capital, with book value usually only the tip of the iceberg of wealth. The real value of the organization is below the visible surface in its intellectual capital. In the Balanced Performance Measurement System, 4 factors combine to create the virtuous cycle that leads to increased market value: human capital, structural capital, external capital and financial performance. As investments are made in human capital, more competent and capable people develop better structural capital, leading to the development of more productive external capital, resulting in better financial performance.

Four factors combine to create the virtuous cycle that leads to increased market value. Three of these factors are related to intellectual capital; one is financial. as investments are made in human capital, more competent and capable people develop better structural capital for an organization. Improved human capital and structural capital go on to create more productive external capital through the delivery of better products and services to high-value customers. The intellectual-capital factors combine to create better financial performance-the fourth element in the cycle. When a portion of the new profits is poured back into building intellectual capital, a virtuous cycle begins its upward spiral into further organizational value and growth[2].

If Organizations enhance knowledge and organizational learning, they can increase their intellectual capital and value.

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CONCLUSION

There is a transformation continually in the world. People, organizations and governments is affected by transformation. The idea of intellectual capital started a decade or so ago, as two trends began to emerge: 1) the shift from production-based economies to service and knowledge-based businesses; 2) the notion of "the invisible balance sheet". Intellectual capital has more value for organisations than physical assets.

Knowledge has been recognized as a valuable resource by researchers. intellectual capital simply means the knowledge resources of an organization. Success of organizations depends on creating , discovering, capturing, disseminating, measuring knowledge. If organizations enhance their organizational learning, they will increase their knowledge and intellectual capital. Learning suggests ongoing, never-ending and always changing. It is the foundation of adaptability and innovation. The economic value of learning is a given because of its role in most business decisions and transactions.

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