

INTELLECTUAL CAPITAL: A HIDDEN WEALTH

Dr. Mohammad Anam Akhtar*, Dr. Shweta Singh**, Mohd Ariz Siddiqui***

*Assistant Professor, Department of Management, United Institute of Management, U.P., India

**Assistant Professor & Head of Department of Applied and Sciences and Humanities, United College of Engineering and Management,

***Assistant Professor, Department of Business Administration, Integral University, U.P., India

Abstract:

Capital, in the business context, refers to any asset that will produce future cash flows. The most well known asset types are tangible in nature. Tangible capital therefore refers to the physical and financial assets of the organization. The value of such assets is disclosed periodically (by publicly listed companies) and can be found easily on the balance sheet of the Company's financial records. Physical assets can mean land, machinery, inventory, plants, trucks, etc. whereas financial assets refer to the shareowners equity, retained earnings, working capital, prepaid expenses, accounts receivables, etc. Intangible assets on the other hand, such as the skills of the workforce and its organization, are increasingly becoming important towards determining future profits. However, they are much harder to determine, harder still to quantify into a value and therefore are never reported. Hence these types of assets remain largely invisible to the external world – and more often than not to insiders as well.

Thomas Stewart, a pioneer in the study of such intangible assets, is credited with having coined the term '**Intellectual Capital**' to refer to these assets. After more than a decade of studies by various other scholars in this area, there is general agreement that Intellectual Capital itself is composed of three distinct types of capital - Human Capital, Structural Capital and Relational Capital.

- **Human Capital** is the availability of skills, talent and know-how of employees that is required to perform the everyday tasks that are required by the firm's strategy.

- **Structural Capital** is the availability of information systems, knowledge applications, databases, processes and other infrastructure required to support the firm in executing its strategy.

- **Relational Capital** is the external linkage of the Company with Suppliers and Customers that enables it to procure and sell goods and services in an effortless manner.

In the modern world of cut throat competition firms are paying a lot of attention on Intellectual Capital because it is a very important aspect that contributes a lot in development of the **core competencies** of the firm and a very important source of generating future cash flows. .

This article therefore tries to give the importance of Intellectual Capital for the organizations in the modern era, emphasizes on the measurement and recording of it in the balance sheet of the organization in order to make the stakeholders aware about the contributions of the Intellectual Capital in the organizational growth and development, use of **technology** for the purpose of valuation and recording of Intellectual Capital and also tries to evaluate the attitude of Indian enterprises towards Intellectual Capital.

Keywords: Intellectual Capital, Human Capital, Structural Capital, Relational Capital, core competencies, technology.

Intellectual Capital:

Knowledge is increasingly regarded as an essential growth factor. Often, it is regarded as a more important asset for stimulation of growth and competitiveness than the mere, though necessary, investments in machinery, buildings and other types of tangible assets. Intellectual capital accounts constitute a tool to represent the intellectual capital of a company.

Through these accounts, a company both internally and externally communicates its value as being highly influenced by its intellectual capital, i.e. the assets related to the employee knowledge and expertise, the customer confidence in the company and its products, the company infrastructure, not least in the form of IT systems and administrative procedures, and the efficiency of the company's business processes. Intellectual capital, also termed 'knowledge capital', helps to explain the difference between the company's market value and book value because the intellectual capital is not included in financial accounts. This applies particularly to innovative companies where the difference is more distinct than in connection with other types of companies.

The Intellectual capital accounts are beneficial because:-

- The intellectual capital accounts can be used to support the growth of the company.
- Both internal and external attention can be drawn to the company's way of functioning. This brings the company's management system and its development over time into focus.
- The ways in which investments in intangible capital are reflected in the results of the company can be illustrated.
- The intended implementation of the central strategies of the company can be demonstrated. Since developing a vision is often a lengthy process, the intellectual capital accounts can help to illustrate how and at what rate the company will move towards its strategy.
- By publishing intellectual capital accounts, a company can prove the existence of a long-term perspective to interested parties. The intellectual capital accounts can be used to demonstrate that the long-term aspect is present in every daily action.

- Towards the employees, the intellectual capital accounts can be used to stress the importance of devoting attention to the development of human and technological resources over a long period of time.
- Disclosure of costs and assets within the area of human resources becomes possible. This is of particular importance to knowledge-intensive companies where the competence of the staff is a critical asset.
- The measurements of the intellectual capital accounts constitute a special combination of the following resource categories:
 - **Human resources.** This category covers statements about the composition, management and satisfaction of the human resources.
 - **Customers.** This category covers statements about the composition, management and satisfaction of the customers.
 - **Technology.** This category typically covers statements about the scope, function and application of the IT system.
 - **Processes.** This category typically covers statements about the scope, equipment and efficiency of the business activities.

These four categories make up the contents of the intellectual capital accounts. Measuring and reporting on these aspects of the company can reveal the sources which will create future financial results and thus growth. In other words, the intellectual capital accounts disclose growth-creating progress factors. Results within each of the four categories will, over time, be reflected in the financial accounts of the company. In this way, they identify the growth-driving areas of the company.

Though intellectual capital accounts are not used for capital raising purposes, they are interesting to many investors. Intellectual capital accounts often deal with the non-financial elements of the corporate strategy, customers, products and knowledge-base also interesting to the capital market.

The intellectual capital accounts and the intellectual capital are concerned with the value creation of companies. They are both a statement of a company's value at a given time and form part of a bigger picture where they are used to identify the sources of the company's growth.

Problems:

There are many problems that are posed before any company before it decides to report the intellectual capital in the books of accounts. These problems are as follows:

- Why the company wants to measure intellectual capital?
- How to measure intellectual capital?
- What are the current and potential effects of the intellectual capital reporting?
- What are the problems with developing a system for measurement of intellectual capital?
- How to decide what elements should be reported to the world?

Models and Principles of Intellectual Capital accounts:

Intellectual capital accounts are not an authorized accounting term. However, this does not mean that they do not have a history in books and magazines which have described and analyzed how to measure the company's intellectual capital in one way or another. Three main categories of models can be singled out in this connection. One focuses on the 'figures', the other on the 'assets' and the third on 'the bridge to the future.' The '**figures**', which are described first, concern models of concrete measurements. They deal with human resource accounting and the key figures recommended by [Tjänsteforbundet]. Then follows a description of the 'assets' which are models of the types of assets which the intellectual capital accounts should deal with. One model of this is the invisible balance sheet and the other is the resource matrix. Both models illustrate how the financial balance does not account for the values inherent in the intellectual capital. Finally, 'the bridge to the future' is described. The bridge to the future covers models of the way in which the intellectual capital will be embedded in the financial capital over time. One model is the balanced scorecard which shows that balance between present and future can be obtained by describing both the company's financial capital and the company's customer, process and innovation capital. The other model is a business plan often used by venture capitalists to assess the potential of innovative companies. Here, the company's technological competence is systematically translated to market oriented opportunities.

The Figures:

The ideas of how to compute the figures in the intellectual capital accounts fall into two categories. One is human resource accounting and the other is the key figures recommended by Tjänesteforbundet.

Human Resource Accounting:

Human Resource Accounting is a set of accounting methods seeking to settle and describe the management of the company's staff (Flamholtz, 1985, 1987, Mouritsen, 1985, Sackman et al., 1989.) It focuses on the employees' education, competence and remuneration. It promotes the description of the investments in staff and enables the design of a human resource management system to follow and evaluate the consequences of various human resource management principles.

There are four human resource accounting models:

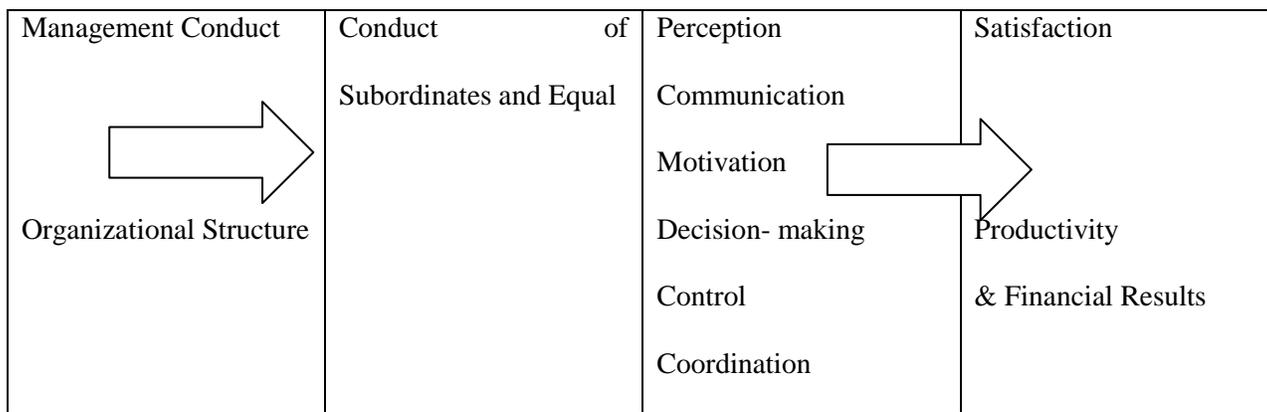
1. The individual's financial value describing the individual's anticipated value to the company.
2. The financial value of groups describing the connection between motivation and organization on one hand and financial results on the other.
3. Staff replacement costs describing the financial situation in connection with recruitment, reeducation and redeployment of employees.
4. Human resource accounting and balancing as complete accounts of the human resource area.

The first model describes the financial value of the individual which consists of the relevant person's anticipated value to a company. This value depends on two factors. Firstly, it depends on the person's ability to carry out his job with a certain productivity and with the flexibility that makes the person able to co-operate with others. Secondly, it depends on the person's satisfaction with being in the company. This is relevant when assessing the probability of the person staying in the company. The realizable value is thus a function of the person's financial value and the person's satisfaction. This means that a person's significance to the company's economy over time is assessed by examining a person's typical career development on the basis of historic knowledge.

This may be a development from junior consultant via consultant to senior consultant and partner in a consultancy firm which can be used to determine what the economic impact of various job types in a typical career means to the company's results. Here, it may be possible to compute 'the present value' of a person.

The second model establishes the **value of groups** primarily as a function of working climate. This model does not measure values, but 'surrogate concepts in the form of welfare and motivation.

This model looks like the following:



This model illustrates that satisfaction is linked with financial results because they are both results of a specific management style promoting communication and motivation. As illustrated by the model, the basis of this is a management conduct which initiates organizational processes. If they work, they lead to both satisfied and productive employees.

The third model focuses on replacement costs related to the expenses connected with acquisition, training and separation. Acquisition covers expenses for recruitment, advertising etc. Training covers education, on-the-job training etc. Separation covers lost production etc. when a person leaves a job. Gröyer & Johanson (1991) have described these costs by underlining that both direct and indirect costs are related to all three elements. To understand and thus be able to calculate the three elements, it helps to model and describe the costs connected with an imaginary replacement process. Such a process can be described in the following way.

i)Recruitment Costs	Direct Cost	Advertising Other recruitment channel Selection Appointment
ii)Training Costs	Indirect Cost	Time consumption in connection with recruitment Administration of recruitment
iii)Separation Costs	Direct Cost	Introduction to work place Course Costs On the job training
	Indirect Cost	Administration time
iii)Separation Costs	Direct Cost	Expense in connection with dismissal Production lapse
	Indirect Cost	Decrease inefficiency

This model can be used to describe the development of costs in connection with replacements.

Finally, the fourth model concentrates on cost control, capitalization and depreciation of the historic expenses for the human resource area. Here, intellectual capital accounts similar to the following are constructed:

Revenues		XXX
(-) Supplier Cost		XXX
= Gross increase in value		XXX
(-) Calculated Depreciation		XXX
= Net increase in value		XXX
1* Direct pay	xxx	
1* Staff turnover cost	xxx	
1* Absence cost	xxx	
1* Social cost related to staff	xxx	
1* Education	xxx	
= Result before financial items		XXX

This is a complete human resource accounting result specifying the way in which the company handles its staff. One effect of this system is the visualization of the impacts of human resource management revealing the consequences of inexpedient human resource management routines. They will appear directly in the accounts.

The key figures of Tjänesteforbundet:

Tjänesteforbundet (1993) has developed a set of recommended measurements to be used in service businesses. Tjänesteforbundet is an association of service businesses with an objective to bring management of service into focus. The measurements recommended by the association aim at supplementing the financial accounts which are considered to be suitable for measurement of the value of industrial companies. By applying the measurements, the value of service companies will be expressed more clearly. Since the mid-1980s, several books aimed at developing a taxonomy

describing the knowledge-intensive company have been published through Tjänesteforbundet. Many of the companies today working with intellectual capital accounts have been inspired by Tjänesteforbundet's work.

The key figures recommended by Tjänesteforbundet for knowledge-intensive companies are based on customer capital, individual capital and structural capital typically measured on non-financial indicators. These are compared with a number of efficiency-related financial measures which are traditional financial key figures. The measurements of knowledge thus complement the traditional financial key figures. This makes them different from the human resource accounting result which seeks to integrate considerations for knowledge and the financial reporting form.

Tjänesteforbundet's recommended key figures for service companies:

Factors	Position/ present (History)	Development(Future)	Stability/Risk	Efficiency
Market	Market share	Market share over three years New services/total sales Order book Price and volume development	Sale/ business sector Sale/ service	
Customers		New customer/sales	Largest five customer share of sales	
Individual/ skills	Level of education Absence due to sickness in days/person	Investment in education/person	Staff turnover	

	Age structure		Seniority/ person	
Structural value	Number of PCs/person IT/person	IT investment research and development/sales	IT costs/staff costs	
Financial key figures			Cash flow/sales Staff or capital costs/ sales Equity ratio Interest contribution ratio Debt-equity ratio	Sales/person Value added/person Result after financial items/person Rate of return, debtors Rate of return, stores Cash flow / person

The Assets:

Another discussion about the value of intellectual resources concentrates on the way in which the contents of intellectual capital can be structured at a conceptual level. Two important bids, the invisible balance sheet and the resource matrix are described in the following.

The Invisible Balance Sheet:

The purpose of the invisible balance sheet is to establish a method to represent the assets of knowledge-based companies (Arbetsgruppen Konrad, 1989, Sveiby, 1996.) It is an extension of human resource accounting. The invisible balance sheet divides the company's intellectual capital into individual capital and structural capital. The first is tied up in individuals, whereas the other is tied up in the routines, procedures and systems of the company. They are included in the company's balance sheet because they are assets, i.e. resources contributing to the production of future results.

They are 'invisible' because they are currently not included in the financial balance sheet of the accounts.

The product of individual capital and structural capital is the total intellectual capital. The individual capital is expressed through the professional competence and expertise of key employees describing the corporate strategy. In certain companies, the strategy operates with "income persons" (e.g. consultancy firms, consultants or universities described through one type of professionals.)

However, it may be broader in other companies more capable of converting knowledge into procedures, organization and technologies. This capital can be described in several ways, e.g. as regards education, experience, number of persons in the company with relevant background and the specific distribution of responsibilities in relation to customers and projects.

The structural capital concerns the competitive advantages of a company in addition to the abilities of the employees. In course of time, the company may have developed and accumulated experience within the administrative field and a reputation for a specific product, services or production method. Such experience in co-operating and supplying services to surrounding customers is an asset in the sense that it demonstrates how the company's assets are linked together in a specific competence. The structural capital thus provides the individual capital with a special competitive advantage.

Individual Capital	Structural Capital
1. Number of persons involved in direct customer contact 2. Level of education 3. Average number of years in job 4. Investment in education 5. Division by customer relation: <ul style="list-style-type: none"> - Employees only carrying out part of a project - Employees responsible for entire project - Employees with complete responsibility towards a customer. 	1. Attitude and opinions of staff <ul style="list-style-type: none"> - Attitude measurement - Experience (number of years in trade) - Recruitment possibilities - Share of non routine tasks - Wage level - Agreement with key persons 2. Problem solving potential <ul style="list-style-type: none"> - Standardization of certain core services 3. Customer and market capital <ul style="list-style-type: none"> - Management competence - Network 4. R&D <ul style="list-style-type: none"> - Investment in new competence

The Resource Matrix:

The resource matrix is a parallel to the invisible balance sheet developed by Lush & Harvey.

Resource described in the accounts	Tangible Assets	Intangible Assets
	1. Plant 2. Equipment 3. Stores	1. Goodwill
Resource not described in the	1. Staff	1. Strategic Plan

accounts	2. Technology 3. Distribution Channels 4. Board 5. Information Systems	2. Trade marks 3. Image 4. Relation with owners 5. Relation with bank and investors 6. Corporate Culture.
----------	---	---

As the invisible balance sheet, this matrix is based on criticism of the balance sheet of traditional accounts. The resources included in the traditional balance sheet are listed in the top left row and typically consist of buildings, equipment and stores as well as goodwill. Lush & Harvey want to draw attention to everything in the bottom row of the table. Through the listed examples they show that traditional accounts could very well provide more consistent reports on resources contributing to the increase in the company's value. They illustrate that intangible assets are not included in traditional balance sheets, and they show that important tangible assets are also omitted from the accounts. These are the structural capital - to follow the logic of the invisible balance sheet; however, they provide a broader definition. This is due to the fact that they are more interested in structural capital than individual capital; they deal with the knowledge-intensive company rather than the knowledge-based company. Lush & Harvey's statement includes both internal procedures and structural relations with the surroundings. In the same way, the intangible assets outside the accounts are primarily directed towards the impacts of management. They focus on, for example, the very existence of a good strategic plan, good relations with investors etc. as being valuable. Lush & Harvey seek to illustrate the importance of describing more resources and types of competence than those present in traditional accounts.

Conclusion:

Hence here we find various models and methods of measuring intellectual capital. Various Dutch companies have undertaken various studies on this topic and concluded that providing information about intellectual capital in the books of accounts improves the image of the company and also helps in gaining the confidence of the investors.

Intellectual capital accounting is the future of accounting that is done by the companies though it is still at the stage of infancy particularly in countries like India, where only few companies like Infosys is doing intellectual capital accounting but that information is still not public they are doing it for their own good but sooner or later companies are going to understand the importance of this and going to follow suit.

The adoption of a single set of accounting standards worldwide in the form of **IFRSs** is also going to help in this context as it promotes a judgement based accounting rather than a rule books kind of accounting which is presently done in a number of countries and companies.

Therefore intellectual capital accounting is the future of accounting and sooner or later this hidden wealth of the companies is going to be visible through their financial statements.

References:

American Institute of Certified Public Accountants. The Special Committee on Financial Reporting Improving Business Reporting – A Customer Focus New York: AICPA, 1994.

Flamholz, E., Valuation of Human Assets in a Securities Brokerage Firm: An Empirical Study, Accounting, Organizations and Society (1987, s.309-318).

Grant, R.M., The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation, California Management Review (1991, vol.33, no.3).

Kaplan, R.S. & Norton, D.P., Putting the Balanced Scorecard to Work, Harvard Business Review (1993, September-October).

Barney, J. (2001) 'Resource-based theories of competitive advantage: a ten-year retrospective on the resource-based view', Journal of Management, Vol. 27, No. 6, pp.643–650.

Bontis, N. (2004) 'National intellectual capital index', Journal of Intellectual Capital, Vol. 5, No. 1, pp.13–39.

Bontis, N. and Fitz-enz, J. (2002) 'Intellectual capital ROI: a causal map of human capital antecedents and consequents', Journal of Intellectual Capital, Vol. 3, No. 3, pp.223–247..

Bukh, P.N., Johansen, M.R., Meca, E.G. and Mouritsen, J. (2002) 'IPO Prospectuses as intellectual capital reports: a comparison of danish and spanish reporting practices', paper presented at the 25th European Accounting Association (EAA) Annual Congress, Copenhagen, Denmark.

Brennan, N. and Connell, B. (2000) 'Intellectual capital: current issues and policy implications', Journal of Intellectual Capital, Vol. 1, No. 3, pp.206–240.

Canibano, L., Garcia-Ayuso, M. and Sanchez, P. (2000) 'Accounting for intangibles: a literature review', Journal of Accounting Literature, Vol. 19, pp.102–130.

Guthrie, J., Petty, R. and Johanson, U. (2001) 'Sunrise in the knowledge economy: managing, measuring and reporting intellectual capital', Accounting, Auditing and Accountability Journal, Vol. 14, No. 4, pp.365–382..

Kasper-Fuehrer, E.C. and Ashkanasy, N.M. (2001) 'Communicating trustworthiness and building trust in interorganizational virtual organizations', Journal of Management, Vol. 27, No. 3, pp 235- 254.

Leitner, K-H. and Warden, C. (2004) 'Managing and reporting knowledge-based resources and processes in research organisations: specifics, lessons learned and perspectives', Management Accounting Research, Vol. 15, No. 1, pp.33–51.