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ACCOUNTING FOR INTELLECTUAL CAPITAL: A CASE STUDY OF SELECT IT COMPANIES IN INDIA

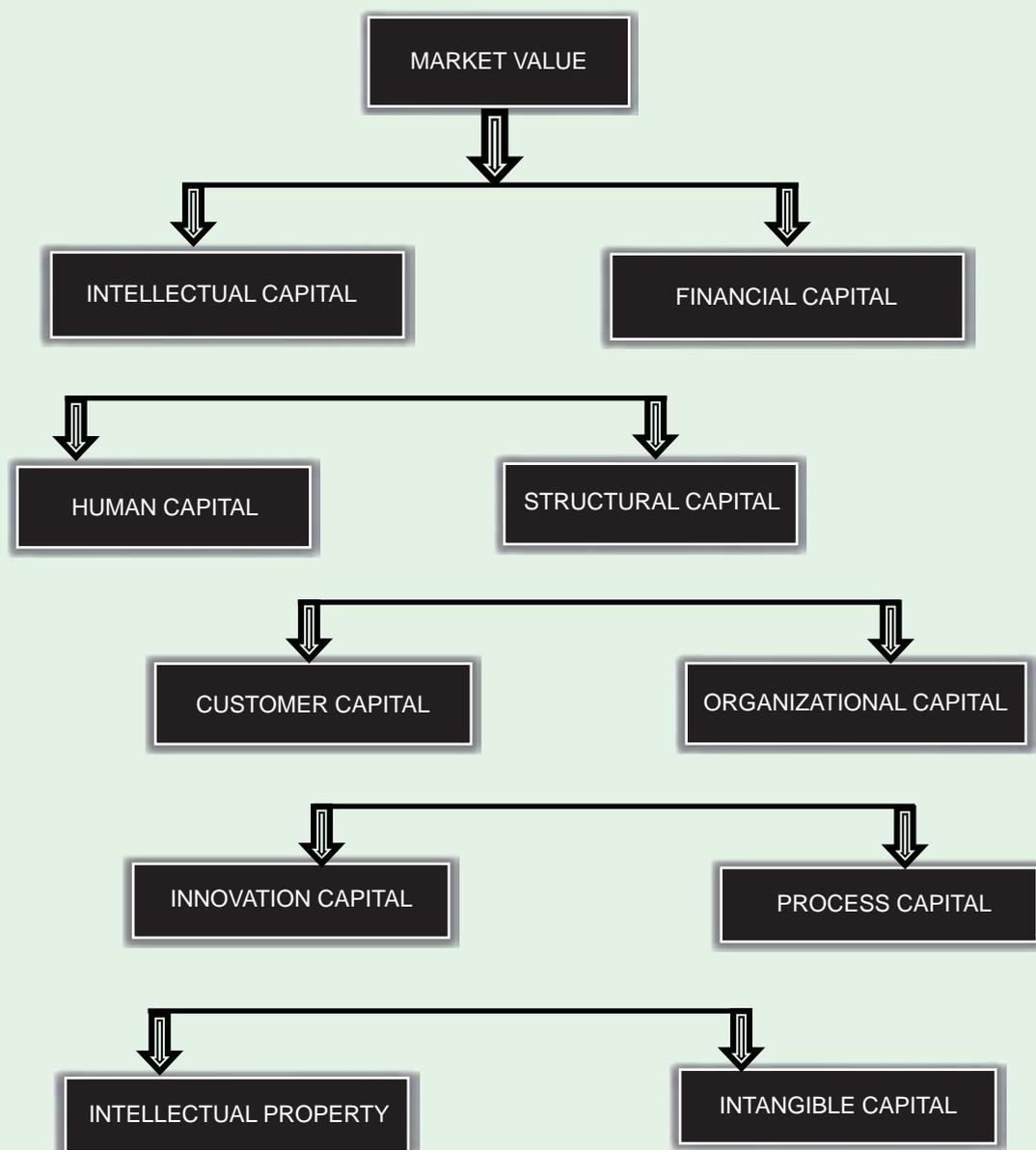
Introduction

Today's business world is becoming competitive and complex with rapidity. In this complex situation sustainability becomes the main challenge for an organization. Companies are now trying to be more flexible and innovative in their operations and strategies. Businesses are being conducted based on new economic models. They seem to be depending more on intangible assets than on traditional hard assets. These intangible assets are often termed as intellectual capital. Intellectual capital is the intellectual force or capability of an organization that drives the other productive resources and adds value to the business structure. Most common forms of intellectual capital (IC) that exist and work for an organization are human intellect or knowledge, relational attributes and structural capital. These core components of IC allow organizations to execute their strategies to achieve better business performance. It originates from the coordination between an organization's human capital, its innovativeness, and competencies to enable it to make differences in the market place. With time global economy is also changing. It is becoming more dependent upon service driven industries than on traditional manufacturing industries. Besides that business environment is now becoming knowledge based and intellectual capital oriented. As a result, the service driven companies are finding enormous niches to explore and fit into the current market place. And they are mostly dependent on their intellectual capital than on the conventional asset structure. Thus it is quite imperative now for the companies that are depending mostly on intellectual assets to develop and encourage practices for valuation and accounting of intellectual capital to report their periodic results to the investors more clearly. However, it is at the same time also inevitable that intellectual capital at the organizational

level has different forms and identities. It is not only the individual knowledge that works as intellectual capital for an organization but there are other varieties too, such as organization culture, customer relation, managerial prospects etc that are generally rooted deep in the organizational structure and collectively determine the way in which an organization should proceed and thereby constitute the elements of IC in an organization. Thus, IC refers to a set of intellect based assets which helps an organization in developing competitive advantages. From accounting perspective IC has its own importance and significance. Nowadays, companies should have genuine philosophy regarding their intellectual capital to survive in market competition. Therefore, IC is not merely an asset like all other usual assets that an organization generally holds, but it is something extraordinary that has enormous value impact for an organization today. The following exhibit 1 identifies how intellectual capital exists in different forms in an organization and how it combines the other organizational components to create a strategic alliance among all parts of an organization to facilitate various organizational activities as per Skandia's model:

From the above exhibit it is clear that the value of a firm depends upon its financial capital and intellectual capital. IC represents a composition of human capital and structural capital of an organization. Structural capital is formed by the two important factors viz. customer relation and organizational trust. Customer relationship includes all forms of relationships that a company generally holds with its customers. It includes customer loyalty, customer satisfaction, company name and image etc. And on the other hand, organizational capital can be built through innovative ideas and technological expertises. The example of such capital may exist in the forms of licensing arrangements, financial relations etc. Again for generating

Exhibit 1: Skandia's model of intellectual capital



innovative ideas and strategies two things are must- one is intellectual property and the other one is intangible capital. Some of the key components of intellectual property are know-how, technical expertise, and problem solving capability i.e. creativity and entrepreneurial skills. Culture, on the other hand, is of fundamental importance for creating intangible capital because it provides an organization the ultimate framework in which it operates as an independent entity, in order to achieve the overall objectives.

Since “intellectual capital” has become the new buzzword in business world today, this paper aims at

examining the current practices of intellectual capital measurement in India through a case study on selected Information Technology (IT) companies in India. IT industry is well-known for its intellectual capital. It is one of those industries which rely mostly on intellectual capital rather than on other traditional hard assets and hence the focus is on IT industry here.

The remainder of the paper is organized as follows. *Section 2* sketches the objectives of the paper. *Section 3* discusses the research methodology of the present study. Time series analysis and cross sectional analysis on intellectual capital valuation of the concerned companies have been done

in *Section 4* and an elaborative analysis on accounting procedures for IC by the selected IT companies is done in *section 5*. Finally, recommendations are drawn in *Section 6*.

Objective of the Paper

The *general objective* of the paper is to examine the present state of intellectual capital measurement procedures in an intellectual capital based industry of India. *More specifically*, the paper attempts to:

- explore the amount of intellectual capital owned by the selected IT companies in India;
- identify the accounting aspects of intellectual capital by such companies;
- identify problems of valuation and accounting of intellectual capital, if any and suggest policy measures;

Research Methodology

The study is primarily explorative in nature. The *explorative* part is based on the existing literature on the subject. This includes the discussion on the concept, scope and components of intellectual capital. To corroborate the explorative observations, a sample of three leading IT companies (*Wipro, TCS and Infosys*) is drawn from the IT industry of India. The focus of the case study is on firm level analysis, for which financial data are being collected from the websites of the concerned IT companies and other relevant secondary sources. A time frame of three years from **2009-2012** is selected to make a time series and cross sectional analysis between these companies regarding

the valuation and accounting measures taken for their IC. Though there are several other methods such as Return on Assets (ROA), Direct Intellectual Capital Method (DIC), and Balance Scorecard etc available for valuation of intellectual capital but here, Market Capitalization Method (MCM) method is taken to value intellectual capital of the selected IT companies just because of the fact that it is based on the capital markets premium and can invariably signify the positive difference between a company's market capitalization and its shareholders' equity as the company's intellectual capital.

Valuation of Intellectual Capital by Some Selected Indian IT Companies

This section makes a time series analysis of the value of IC of the three major IT companies in India viz; Wipro, TCS and Infosys for the time span starting from 2009-10 to 2011-12 and thereafter makes a cross sectional analysis of the same during the said periods. For identifying the amount of IC held by the selected IT companies' three main steps are followed. Firstly, their market capitalization is taken as the main basis. Secondly, their net worth or share holders' equity is considered and thirdly, the difference between their market capitalization and share holders' equity is measured to identify the amount of IC held by them during the said periods. All the amounts are expressed in terms of 'Billion Rs'. Thus, the following exhibit 2 shows the calculation of IC owned by the selected IT companies during 2009-10, 2010-11 and 2011-12 accordingly:

Exhibit 2 Time Series Analysis of Valuation of Intellectual Capital of the Selected IT Companies

Intellectual Capital of Wipro

	2009-10	2010-2011	2011-2012
Market Capitalization	1038	1179	1082
Share Holders' Equity	196.549	240.371	286.163
Market Capitalization — Share Holders' Equity	1038-196.549	1179-240.371	1082-286.163
Intellectual Capital	841.451	938.629	795.837

The above table shows that during 2009-10, the amount of IC held by Wipro was 841.451 Billion Rs. while this went up to 938.629 Billion Rs. in 2010-11 and followed by 795.837 Billion Rs. in the last financial year i.e. 2011-12.

Intellectual Capital of Tata Consultancy Services Ltd

	2009-10	2010-2011	2011-2012
Market Capitalization	1527.90	2317.15	2287.6
Share Holders' Equity	184.67	245.05	295.79
Market Capitalization — Share Holders' Equity	1527.90-184.67	2317.15-245.05	2287.6-295.79
Intellectual Capital	1343.23	2072.1	1991.81

The above table shows that during 2009-10, the amount of IC held by TCS was 1343.23 Billion Rs. while this went up to 2072.1 Billion Rs. in 2010-11 and followed by 1191.81 Billion Rs. in the last financial year i.e. 2011-12.

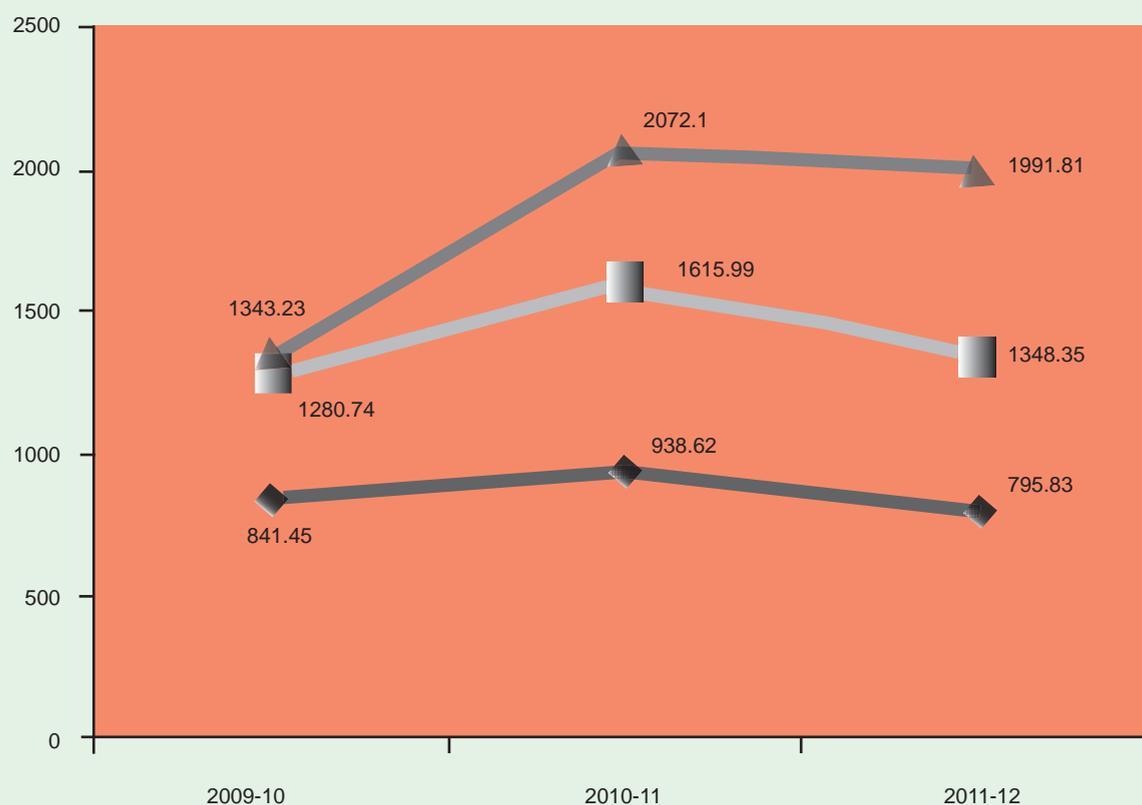
Intellectual Capital of Infosys

	2009-10	2010-2011	2011-2012
Market Capitalization	1501.1	1861	1645.92
Share Holders' Equity	220.36	245.01	297.57
Market Capitalization — Share Holders' Equity	1501.1-220.36	1861-245.01	1645.92-297.57
Intellectual Capital	1280.74	1615.99	1348.35

The above table shows that during 2009-10, the amount of IC held by Infosys was 1280.74 Billion Rs. while this went up to 1651.99 Billion Rs. in 2010-11 and followed by 1348.35 Billion Rs. in the last financial year i.e. 2011-12.

Exhibit 3 Cross Sectional Analysis between the Selected IT Companies regarding Value of IC

Intellectual Capital (Billion Rs.)



The above exhibit 3 brings a cross sectional analysis regarding the value of IC of the selected IT companies during 2009-10, 2010-11 and 2011-12. The first trend line from below shows IC position of Wipro for the said time span and the second and third trend lines from below show the trend of value of IC, held by Infosys and TCS respectively for the three consecutive financial years starting from 2009-10 and up to 2011-12. It depicts that though these companies are operating in the same

dimension and fall under the same industry, but TCS is in better position in respect of possession of intellectual capital for the examined fiscal years. Since this paper is only concerned with IC valuation and its accounting aspects by the selected Indian IT companies, the reasons behind such variation in IC value of the respective companies are not analysed here and the cross sectional analysis ultimately reveals the fact that there certainly exists some amount of IC in an IT company's assets structure irrespective of

its name, business volume, revenues, asset and liability structures etc. Thus, it has been clearly observed that all the three leading Indian IT companies have been vastly depending upon their IC during the examined periods and this analysis certainly proves that IC plays an important role in creating and sustaining business value for these IT companies.

Accounting of Intellectual Capital by the Selected Indian IT Companies

This section reveals the accounting aspects of intellectual capital as followed by the selected IT companies in India. It tries to explore how these companies account for IC in their financial statements to depict the true and fair view of their business. It is already said above that quite often the knowledge based assets are termed as intellectual capital in today's accounting world. Since assets are nothing but the reflection or mirror image of the liabilities in the balance sheet, so every single asset should be supported by the correct and corresponding amount of liability. Therefore, if the positive difference between a company's market capitalization and its share holders' equity results into its IC, then such IC should have some corresponding background or entries in the financial statements to maintain parity with the basic accounting procedure i.e. assets generally have two parts; one is its gradual decrease in terms of utility to be shown in income statement and the other is its future expected benefit to be shown in balance sheet. Now how these companies are dealing with their IC in their financial statements is being described and analysed in the following segment.

Accounting of Intellectual Capital by Wipro

After analysing the financial statements of Wipro Limited for the financial years 2009-10, 2010-11 and 2011-12, it has been observed that Wipro generally shows its IC in different forms in its financial statements. Every year it incurs a huge amount for paying its employee cost as salary which is shown in the income statement. Again the amount spent for employee training and development is shown as a part of training and development cost. Further the company is also observed to be spending a huge amount as a part of its regular product research and innovation. The company clearly shows its patent, trademark, copy rights and other similar kind of intangibles in its balance sheet. It is also found that Wipro is incurring for maintaining and developing its client base which signifies the development of relational capital and it certainly forms an integral part of the company's overall intellectual capital base. Besides that, for maintaining and developing its client base Wipro Limited has been continuously working on different projects like 'Customer Co-Innovation', 'Integrated Cloud Services', and 'Analytics & Information Management' etc. Thus Wipro incorporate its IC in its financial statements.

Accounting of Intellectual Capital by TCS

TCS is highly intended to form an effective intellectual capital base over the years. For this it has taken some policy measures. Intellectual property management programme, invention valuation programme, collaborative mining of invention etc are to mention a few of such steps. However the financial statements of TCS clearly show that the company uses to account for its IC mainly through its profit and loss statement and balance sheet. Instead, the company incurs every year a huge amount of investment for software development, software licensing and for similar kind of intellect based activities. Beside this recruitment and training expenses are done each year for further development and betterment of human capital. For maintaining and developing relational capital a separate expense in the name of 'communication expense' is every year charged against profit. Other intangible assets like patents, copyrights, trademark etc are shown in the balance sheet and the portion impaired or amortised is shown in concerned financial statements as per the specific accounting guidelines.

Accounting of Intellectual Capital by Infosys

Infosys follows a separate strategy to follow up its IC. It is mainly concerned for developing its relational capital through maintaining a strong client base. For doing so it has to incur huge amount every year for developing new infrastructure capital, new processes and new technologies etc. These are nothing but the expenses done for bringing IC into existence. Beside this Infosys follows a strategy for nurturing its intellectual talent also. It considers intellect as an integral part of its business. It nurtures talent by understanding its nature and thereby creates a brand image for its own. This image is certainly forming a part of the company's intellectual capital base. For giving intellect or individual knowledge a right shape like TCS and Wipro, Infosys similarly spends much on training and development of its human capital. Infosys has built up a research and innovation group consisting of technologists and intellectuals for conducting regular research on newer product development and technological advancement and for which it is incurring a good portion of its revenue every year and the technology or IT products developed from this programme are naturally shown in the financial statement accordingly. All these initiatives and acts certainly prove Infosys's attempts in nurturing its IC and accounting aspects of its intellectual assets as well.

Findings and Recommendations

The above study reveals that IC resides in the heart of the IT industry. It mixes human intellect with various other attributes like customers, processes, databases and IT systems together to convert human knowledge into wealth generating resources. Therefore, the present concerns for

the IT companies are to identify, manage, measure and protect their IC in a better way. Again it has been found in the above analysis that the selected IT companies are incorporating their intellectual assets in their financial statements in the same way as they include and show their traditional hard assets. However, there is nothing wrong with it to show the yearly amount spent for developing and training for IC in the income statement and the other intellect components as intangible asset in the balance sheet but the questions that are being raised presently can be summarised as follows:

- Is this kind of traditional accounting practice enough to show a clear view regarding IC of the concerned companies?
- Are financial accounting and traditional valuation techniques able to cope with the new value drivers properly?
- Are mere valuation of intangibles and charging of expenses required for developing those assets in the income statement sufficient enough for making IC accountable?

To address these issues what is needed is a modernized corporate reporting framework that will enable IT companies to manage these new intellect drivers in a systematic way. As IC is quite different in terms of its features, elements and nature from the other traditional assets so it is difficult to deal with and therefore, the areas in which the Indian IT industry should take a serious look for accounting of their IC are:

- whether the items capitalized are intellect based or not;
- how organizational culture works effectively throughout the organization;
- identify the factors on which relational capital of the organization is based;
- how the organization is dealing with its human capital;

- how effectively human capital is engaged in order to influence future earning capacity of the organization;
- whether research and development activities are being carried on properly keeping the market demand in mind;
- how innovation is to be brought in to develop intellectual property;
- how human knowledge is being used to combine processes and technologies together to develop new IT products;
- whether the existing organizational structure is in line with the present intellectual skills and abilities;

Thus it can be concluded that the above mentioned points if are taken into consideration further then it may help the IT companies certainly to make their present IC accounting more practical and contextual. However, more and more researches on this issue should also be encouraged to explore more simplification and specification of IC accounting to make it more crucial and significant.

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