

Recognising, Measuring, Accounting, Harnessing and Managing Intellectual Capital Assets of Entities

*M.M.K. Sardana**

[Abstract: In the era of knowledge-based economy, economic growth will be driven by people leveraging their 'know-how, innovation and reputation,' surpassing the contributory role of capital, land and equipment. It will become imperative to account for intellectual capital and intangible assets being created to satisfy investors who will invest both capital and resources. As intellectual capital components are identified, accounted and measured, financial institutions will have to reorient their approach to recognise "collaterals" as assets. In the scenario as it stands, capital as well as production may be in the form of intangibles. There will be challenges before the management to bring about efficiency in deploying and managing both intangible capital and intangible production. Such challenges may be addressed by devising somewhat innovative accounting standards—beyond the existing ones—as necessary tools for authorities seeking to manage the intellectual capital of an entity.]

A big divide is emerging in India between the upwardly mobile people that are hopeful of a bright future and the disenfranchised communities that are feeling left out of the growth story occasioned by:

- (i) Inefficiencies in agricultural value chains
- (ii) Lack of water and sanitation facilities
- (iii) Next to nothing access to healthcare
- (iv) Lack of livelihood opportunities
- (v) Lack of educational infrastructure

Such challenges present remarkable opportunities for entrepreneurs looking for avenues to give free play to their initiatives and innovative capabilities. Also, they will look for an ecosystem of right policies, right capital and involvement of diverse actors such as investors, incubators and support services, in order to bridge the emerging divide. The right mix of impact capital and intellectual capital will catalyse the entrepreneurial initiatives. Already the impact investing industry has taken root

* The author is a Visiting Fellow at the Institute.

in the country and a galaxy of entrepreneurs is already in the business. Large corporates are also sensing the logic of encouraging R&D expenditure for development of new products for a potential market of, say, 200 million people compared to the conventional wisdom of investing their all in a product which would at best command a market of 20 million people. Further, corporates are leveraging their technological know-how to design and distribute the most efficient products and services; outstanding examples being clean water systems and affordable diagnostic systems¹.

The emerging synergy between large corporates, impact capital investors and knowledge rich entrepreneurs is directed towards harnessing the national intellectual capital in a coherent manner. It needs to be recalled that India's economic progress, even at the current modest levels, has been largely powered by its intellectual capital. Even in sweatshops such as jewellery and garments, Indian designers contribute majorly. The increasing efficiency of steel, petroleum and auto components industries, increased production in agriculture, and outstanding success in the frontier areas like space, nuclear technology, computer software, etc., all draw on India's knowledge-based capital—the result of a long and sustained process. Those among the intelligentsia who decry the *Nehruvian* policies will also grudgingly acknowledge that it is because of his vision of creating centres for R&D and technological learning that quality manpower is being churned out contributing towards building of rockets, satellites, nuclear bombs, atomic power plants and industrial infrastructure while overcoming several constrains, including the regime of technology denials. Thanks to the built-up legacy, in today's rapidly changing environment, India is well-endowed with the "currency" of knowledge, which is the latest mover and shaker in the marketplace and the power play among the nations. The contribution of knowledge as a factor of production has surpassed that of capital and labour in almost all sectors of economy. Despite a strong knowledge base, India has not been able to make appreciable impact in sectors other than software and pharmaceutical, that is, it has only touched the tip of the iceberg in terms of its

¹ Raj, Vineet and Nisha Dutt (2014), 'Building an Inclusive India: The Real Leadership Opportunity,' *The Economic Times*, March 13.

potential². In order to exploit the vast potential of the knowledge-based component of the Indian intellectual capital (IC), honing the skills of the human resource component of the IC with regard to R&D, design, testing, etc., has become necessary so that professional services can be encouraged in a whole lot of areas. Government of India has a bouquet of initiatives such as Skill India, Make in India and Digital India on its shelf. Operationalisation of these programmes will be a leap forward in the building up of the IC, enabling Indians to foray into hitherto untapped areas beyond the usually talked about software and pharmaceutical sectors. Besides, it will help in honing the existing skills in areas where India's accomplishments already stand acknowledged. Challenges being faced in the operationalization of the above-mentioned frontline initiatives towards enhancing the building up of IC have been brought out in earlier Discussion Notes³.

All these initiatives affirm that intellectual capital will be driven by the "people" and their knowledge built-up through entities that will leverage their (people's) know-how, innovation and reputation to achieve the target of enhancing the IC, surpassing the contributory role of capital, land or equipment. The combined contribution of such entities (which may be institutions, firms and enterprises) will aggregate to form the integrated national capital, which will be the bulwark around which national wealth will be built up.

As the knowledge-based economy gets rooted, it will become imperative to account for intellectual property and the intangible assets being created as these would be brought about by deploying capital and valuable resources. Firms will have to be accountable to their investors with regard to the capital and resources being deployed and assure them that these are being allocated efficiently and demonstrably. The success of such organisations will be measured on the basis of the efficiency of its research and development (R&D). A percentage of the turnover will be spent on R&D, the number of invention disclosures, the patent applications, the number of patents granted, the number of licensees executed for commercialisation and the amount of royalty earned. Since commercial and for-

² Karnik, Kiran (2003), 'Harnessing Our Intellectual Capital,' *The Economic Times*, October 1.

³ ISID Discussion Notes: DN2013/01, DN2014/04 and DN2015/02.

business organisations look at R&D as a profit venture, the investments that are made thus need to be accounted for in a measurable form.

The biggest assets of impact making enterprises are economic competence, including brand equity, firm specific human capital, network that joins people and institutions, and, organisational know-how. The policy framework and regulatory institutions are yet to respond adequately to the emerging scenario in which tangible assets will give way to intangibles as drivers of growth. Even banks and financial institutions feel comfortable in physical asset based lending and are slowly warming up to the concept of collateralisation and securitisation of intangible assets. Regulatory and financial Institutions have been struggling to cope with the fast changing and impact making march from Information Age (1971–91) to Knowledge Age (1991–2002) and further to Intangible Economy (2002–present) where primary factors of production are knowledge-based; all these put together qualify as Intellectual Capital⁴.

There seems to be some agreement among scholars that besides organisational capital, human capital and relational capital, too, are the cornerstones of IC. Relational capital will be outside the organisational domain and will be of the nature of “connections with the outsiders” such as customers and their level of loyalty and its potential to grow with more and more customers patronising the organisation’s products. If one were to capture the entire picture of relational component of the relational capital, besides capital rooted in customer loyalty, “social capital” and even “cultural capital” may have to be brought in.

The value of intellectual capital assets needs to be expressed through a common denominator so that values can be added up and compared, i.e. money, the only measure understood by everyone. Similarly, the format of presentation will have to be universally intelligible, say, in the form of a conventional balance sheet.⁵

⁴ Agarwal, Dr Dhanpat Ram (2012), ‘Accounting for Intellectual Capital,’ *The Management Accountant*, Vol. 47, No. 11, Pp. 1298–1305, November. Available at: <http://icmai.in/upload/Institute/Journal/Nov12.pdf>

⁵ Pyis, Ludo (2011), ‘Intellectual Capital Accounting – How to Measure the Unmeasurable,’ in *Proceedings of the 3rd European Conference on Intellectual Capital*, Nicosia, Cyprus: University of Nicosia. Available at: academic-conferences.org/pdfs/pyis_keynote_ecime11.pdf

Traditional accounting practices will need to assimilate innovations that seek to meaningfully represent the true value of the intangible assets of the company. For example, the total tangible assets of Google may not be in excess of 5 per cent of its total assets. It makes business sense that the firms will increasingly seek to leverage their intangible assets for raising capital for their businesses. It may be recalled that RBI had permitted banks to finance telecom companies bidding for spectrum by mortgaging it. It was a great step forward in the finance sector, foreseeing that in the event of a default, the banks could take recourse to the spectrum—an entirely intangible asset. For the purpose of recording the intangible assets in the account books and hence measuring the same in terms of money, it is capable of being unambiguously recognisable as well as of being evaluated, and thus capable of being an element of financial reporting. In short, transactions relating to such intangible assets should be capable of adhering to recognised rules of accounting—its principles, concepts, conventions and standards. Thus, though Intellectual Property (IP) is a result of the creativity of mind, it is manifested in a form that has a physical existence and possessive exclusive property rights and is statutorily available to its holders. For accounting purpose in terms of money value, it is imperative to measure and assess the fair value of the intangible assets.

Measure of different categories of intellectual properties (customer, human and structural capital) within the overall intellectual capital will vary and will be derived at by imagining the use of such set of capital in terms of current and future growth value components, thus enabling the measurement of future value components and future value creation streams. Summing up of all of the elements that are part of the inventory of each subset of the capital will be of value to the IC. Specialists working in this domain have laid down standard guidelines in the form of accounting standards to capture the intangible assets of organisations in India. Such a standard was incorporated as AS-26 in the sixth schedule of the Companies Act, 1956, which corresponds to the third schedule of Companies Act, 2013. Many international accounting standards for intangible assets are in vogue and are applicable in their respective jurisdictions. While all these accounting standards capture IPR's such as patents, trademarks and copyrights, they do not capture competitive intangible

assets such as knowledge or relationships. To that extent, in determining the overall monetary value of an entity, managements are required to take a final call outside the account books in order to accommodate these left out components of the overall intellectual capital.

Like any tangible asset, intangible assets like IPR will have income/expenses on revenue/capital account depending upon the nature of the transaction involved and will be classified in account books accordingly. It remains, however, settled that expenditure incurred during development phase or acquisition of patent or other IP asset will be of the nature of “expenditure capital” and will be reflected as such in the balance sheet. AS-26 requires that internally generated assets should be distinguished from the acquired IP assets in the account books. Further, AS-26 recognises intangible assets as comprising:

- (i) Brand names
- (ii) Masthead and publishing titles
- (iii) Computer software
- (iv) Licenses and franchises
- (v) Copyrights, patents and other industrial property rights, service and operating rights
- (vi) Recipes, formulae, modules, designs and prototypes
- (vii) Intangible assets under development

The time period for amortisation of these assets is generally ten years.

In practice, however, most firms do not keep a record of the assets that are acquired online and also on account of brand/goodwill in their account books. These are of significance though, when entities are being acquired or demerged and are settled by the management in terms of fair value assessment. This kind of real-life transaction has been recognised by International Financial Reporting Standards (IFRS) such as IAS 38 and IFR 53.

On an assessment of the fair value as can be ascertained with reference to an active market, intangible assets of an organisation are subject to revaluation, lest the amortisation and impairment losses. Active markets for intangibles like production quotas, fishing licence, telecom licence and mining licence, do exist but not for those intangible assets which cannot be subjected to revaluation by application of standards. An increase in the asset's value is credited to "revaluation surplus."

Indian accounting standard AS-26 with regard to intangible assets is conservative compared to, say, IAS 38, in the following specific terms:

- (i) AS-26 limits the usefulness of an intangible asset to 10 years at the maximum, whereas under IAS 38 it could extend indefinitely.
- (ii) AS-26 does not recognise revaluation on initial recognition, whereas IAS 38 is flexible of such constraints. Initial recognition would be on cost basis whereas IAS 38 permits the use of revaluation on cost basis or fair value basis.
- (iii) AS-26 does not provide for the manner in which subsequent expenditure on such assets will be classified, whereas IAS 38 does provide specific guidelines as to the classification, depending upon whether such expenditure is in the nature of maintenance or towards increasing its value.

Once a system of accounting for intangible assets is in place, it will become possible to report on intangible assets and tangible assets distinctively, as was required under the revised Schedule VI (as revised w.e.f. 1st April 2011). Fixed assets were to be segregated into tangible assets and intangible assets, including capital work in progress and intangible assets under development. Once the identity of intangible assets and their valuation and revaluation are firmed up, their treatment for tax purposes will follow according to the applicable taxation convention.

Recognition of the fair value of intangible assets has its own merit, that is, these assets can qualify as "collateral" for raising capital. Even the benefit of insurance

becomes available against, say, losses arising out of infringement of IP, loss in royalty stream, etc.

It has been estimated that in a knowledge-based economy, human resource plays the most important role as 64 per cent of the global economic resources are made up of human resource as against 16 per cent capital resource and the remaining 20 per cent natural resources. Intellectual capital is a product of human resource, which needs to be accounted for in every organisation. An undertaking may be declared as “sick” on the basis of its negative worth under conventional financial accounting though it may have significant IC that is capable of reversing its fortunes. When Tata Motors Ltd had acquired Land Rover and Jaguar from a sick unit of US-based Ford Motors at a price of USD 2.5 billion dollars, it was on the basis of the overall untapped IC capable of reversing its fortunes. Intangible Assets need to be intelligibly assessed and as independently as possible because cost records and financial records are maintained distinctly.⁶

From the foregoing, it is apparent that accounting for intangibles despite Accounting Standards being in place has been at best partial and that, too, conceivable in the common denominator, i.e. money.

Substantial part of the intangible assets thus remains out of bounds to give a true reflection of the overall IC of an organisation. In the knowledge/information age, it is the availability of IC and its effective use that determines the failure or success of an enterprise. At present, very few leading corporations in India disclose information on IC, and purely on a voluntary basis. Scanty and/or inadequate and incomplete information on IC may adversely affect the quality of decisions made by shareholders. According to the findings of a study on disclosure of intellectual capital information in IT sector corporations in India, there was no evidence forthcoming in any of the identified firms included in the study wherein an actual IC statement/report was developed or that any other IC metrics were being published. The reporting, if any, has been vaguely expressed in very “discursive” rather than “numerical” terms, and that little or no attempt has been made to translate the

⁶ *Op. cit.* 4

rhetoric into measures that enable performance of various forms of IC to be evaluated⁷. The finding concluded that there is no evidence to suggest that IC reporting has generated any traction for Indian corporations. It transpires that there is neither awareness nor any interest to record and report IC variables by the surveyed corporations. The reporting is neither uniform nor on a well-informed and measurable basis except in the case of Infosys, which included an “Intangible score-card.”

While intellectual capital is relevant to financial and accounting professionals, its disclosure is an important and complex issue for the management. Management may use a disclosure strategy depending upon its perception—whether it wishes to convince external parties about its true value or it wishes to limit its transparency in order to protect certain important information. Unlike tangible assets, intangible assets are generated internally and are embedded in the skills and expertise of a firm’s workers, its processes, procedures and routines, and the repositories. It is thus unique to the organisation and may be difficult to imitate. In other words, intangible assets are essentially advantage-creating resources. None of such intangible assets are present on balance sheets or other financial records, except that their internal development is expensed out under accounting standards. This state of affairs explains to a large extent the difference between the book value (drawn on traditional accounting standards) and the market value of the firms. If a firm is too circumspect about disclosing its intangible capital, it may find that the cost of financing will increase and that insiders may unduly gain in market at the cost of independent players. Thus, while deciding upon the disclosure policy of its intangible assets, it has to maintain a balance between its strategic long-term interest and reflecting the true value of its worth.⁸

⁷ Bhasin, Dr Madan Lal (2011), ‘Intellectual Capital Reporting Study of IT-Sector Corporations in India,’ *Australian Journal of Business and Management Research*, No. 1, Vol. 1, Pp. 16–28, May. Available at: www.ajbmr.com/articlepdf/ajbmr_v01n01_02.pdf

⁸ Sonnier, Blaise M., Kerry D. Carson and Paula Phillips Carson (2007), ‘Accounting for Intellectual Capital: The Relationship between Profitability and Disclosure,’ *The Journal of Applied Management and Entrepreneurship*, Vol. 12, No. 2, Pp. 3–14. Available at: <https://datapro.fiu.edu/campusedge/files/articles/sonnierb2673.pdf>

From the foregoing it follows that the high-technology companies relying on intangible assets and IC in the conduct of their business will be required to invest in the start-up stage with usual start-up expenditures and also expense out on developing internally generated IC building capacities; as a result, earnings and assets will be underrated. Firms will be required to make disclosures, providing relevant information to investors and stakeholders regarding their investment towards building up of IC and the future prospects of these investments which will not be available in the conventional balance sheet. Once the revenue stream starts flowing healthily, the need for disclosure will become strategy-based. There is a distinct possibility of an inverse relationship between the earnings (revenue) and the obligation to disclose.

It would be interesting to go into the aspect of intellectual capital disclosure in the Initial Public Offer prospectuses, which are crucial corporate communications documents relating to raising of resources for funding the organisation's intended programmes by inviting the capital markets to join. A study was carried out on this aspect pertaining to the period 2011–12 on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) applying for a disclosure index comprising 78 items to quantify the amount of information regarding IC included in the IPO prospectuses, thus attempting to determine the factors that influence the extent of IC disclosure. It was revealed that of all of the independent variables studied, which included the Board, its size, its average age, ownership pattern and industry differences, the IC disclosure is influenced by industry differences. The companies with more intellectual capital disclosed more voluntary non-financial information because increased information helps reduce investors' uncertainty, thus ensuring that the company in question does not have to pay higher premium due to investors' perceived investment risk. Sectors like Biotech, I.T. and other service sectors disclose more information regarding IC as compared to the manufacturing sector—a finding which has been consistent to a well-referred international study⁹.

⁹ Bhatia, Meena and Bhawna Agarwal (2015), 'Intellectual Capital Disclosures in IPO Prospectuses of Indian Companies,' *International Journal of Social Sciences and Management*, Vol. 2, No. 1, Pp. 40–51.

It has been brought out that the value of a company includes significant elements that are not described by the generally accepted accounting methods and thus do not figure in the balance sheet of the company. However, in case of acquisition of the company, the buyer usually allows “goodwill” costs in its accounts when the book value of the purchased company is less than the purchase price. In knowledge-based companies, as they adapt to disruptive technologies operated by increasingly knowledgeable professionals, the importance of “uncaptured” intellectual capital of companies is increasing rapidly which is not reported in the account books. Resultantly, the task becomes complex for management teams because it is difficult to manage something that cannot be measured and visualised. If feasible, integrating related management information into the existing reporting framework will enable the management teams of such companies to operate more efficiently.

It may be restated that very few companies have operations primarily involving physical assets as most companies are service providers. Also, among production factors there is a shift towards the intangible elements. Some studies indicate that in many companies, 75 per cent of the company’s value is not described on balance sheets. Also, the market value of such companies is significantly more than their book value. It has been observed that in knowledge-based industries, the book value of assets to company value is getting smaller as company value grows. Thus, there are hidden assets behind the ones present in the balance sheet as the latter may be largely capturing tangible assets and only limited intangibles like software and patents, leaving out assets like relationship capital, organisational capital, and, knowledge and competence of employees. This calls for a proper representation of the assets of a company, such that the balance sheet must expand with the addition of new elements. However, the difficulty in expanding the balance sheet will surface when these elements will have to be quantified for concrete data or to capture quantitative changes throughout a certain period. The approach to meeting such a challenge will involve capturing of the market value of the company and drawing up a quantified strategic plan to work out the discounted free cash flow of the entity. Both the approaches, that is, of market value and of discounted cash flow should, if logic of quantification is sound, throw up somewhat identical balance sheets.

Unfortunately, both these approaches do not provide the values of IC elements and thus do not provide the managers an understanding of the ability to manage the individual components of IC.

Based on usually accepted accounting norms, investment in IC is mostly categorised as “cost,” which is counted against current revenues that reduce the current profit. The conventional approach does not allow the carrying forward of any cost element for future periods, even in the case of long-term costs, e.g., on internal training. Such an approach has to be reconsidered in order to capture the value of the company more precisely. Taking accounting standards into consideration, if we stop distinguishing between the tangible capital expenditure and intangible capital expenditure and instead account for them under the common head “assets,” such an approach would allow us to better measure the real extent of the profit of each period. Also, it will enable us to build a ground up approach with regard to the handling of IC items. In this framework, a decision on every individual cost item from each category has to be made with reference to the proportion that could be capitalised (based on its efficiency). Besides, the depreciation rule will have to be invoked simultaneously for each group of assets. Such a cost management approach will result in profit reallocation among different periods and in the long-term the net effect will be zero. Costs will be redefined as “capital expenditure,” and the newly created assets will be depreciated during the time horizon. Compared to the conventional approach to management decisions, this approach will provide an altered and more scientific foundation for managements if they see the conventional reports in parallel with the extended reporting.

By simultaneously following the conventional approach and alternate approach, two kinds of balance sheets will come up—both adhering to the classic way of reporting and yet providing useful additional information that might be critical for certain management decisions. Further, the calculation of cash flow related information will remain identical in both approaches.

Following the usual accounting standards in relation to depreciation of tangible assets, the efficiency and obsolescence of IC elements at the end of each period reflect the true value of IC items and decide upon their impairment losses.

Management can control a company's costs only if it is fully aware of the characteristics of the company's assets, including the cost of operation and profit generating capability. Due to the fact that a majority of the assets are intellectual, there may not be an effective cost-control environment without controlling the management of intellectual assets, resulting in significant change in the decision-making process and the general attitude of the management.¹⁰

¹⁰ Boda, György and Peter Szilávik (2007), 'Alternative Accounting to Manage Intellectual Capital,' *The Electronic Journal of Knowledge Management*, Vol. 5, Iss. 1, Pp. 7–18.