

Extent of Investment in Intangible Assets: An empirical evaluation of Indian companies

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ABSTRACT

The present paper attempts to measure the extent and growth of investment in Intangible Assets in the Indian corporate sector. The sample consists of 346 Indian companies selected from BT- 500 on the basis of market capitalization. A sufficiently long period of twelve years from 2000-2001 to 2011-2012 has been taken to gauge the extent of investment in Intangible Assets. The 'Intangible Asset Monitor' model as proposed by Sveiby (1997) has been used to define and measure intangibles. Intangibles are measured by splitting them into Visible and Invisible intangible assets. The overall analysis reveals that intangible assets have shown Compounded Annual Growth Rate (CAGR) of 23.12 per cent in case of investment in Visible Intangible Assets and 28.65 per cent in case of investment in Invisible Intangible Assets. The proportion of investment in Intangible Assets to Tangible Assets also shows an increasing trend over a period of twelve years. Since Intangible Assets give a competitive edge to the companies; companies have begun to raise their investment in these assets in the contemporary times. More research can be undertaken on Intangible Assets with respect to India. Better measurement and disclosure norms are required for Intangible Assets so that these valuable assets can be better explored. The researchers felt challenged due to want of availability of sufficient data for all companies.

1. Introduction

The integration of the world economy has emphasized the need for firms to exploit Intangible Assets on a global scale. The basis of economic development and wealth of the economy lies no longer in the investment in Tangible Assets alone but in the creation and use of Intangible Assets (Lev, 2000; Firer and Williams, 2003; Boujelben and Fedhila, 2011). This increased importance of Intangible Assets in the economic value creation is also attested by the increasing gap between the firms' accounting Book Value and their Market Value (Gu and Lev, 2001). These assets have gained momentum as these assets are unique and inimitable. These days' firms must invest in these incorporeal assets to remain viable and sustain competitive advantage (Boujelben and Fedhila, 2011). Intangible assets are playing an increasingly important role in facilitating productivity and efficiency for the companies (OECD, 2008). These also provide a firm with improved customer attainment and preservation by building customer loyalty and brand image (OECD, 2008). While merging and acquiring a firm, the companies give due consideration to the intangible assets and these are deemed as prominent assets of the companies (PWC, 2014). A higher value is paid by a company with the intention to take advantage of the existing technology, knowledge and other Intangible Assets (Canibano *et al.* 1999; Gu and Lev, 2001; PWC, 2014). Investment in R&D, patents, copyrights etc. give monopoly to the firms for producing innovative products (Pradhan, 2003). Advertising and Customer Relationship Management (CRM), other Intangible Assets are documented as a generator of high profits for the companies as the advertised products are easily recallable and identifiable and the chances of confusion are minimized (Sahay and Pillai, 2009). Last but not the least, investment in Human Assets builds the intellectual capital of companies and helps them in

earning high profits as the companies take advantage of the skills and abilities of its workforce to outperform their rivals (Arrighetti *et al.* 2014).

Despite the growing importance of intangible assets, it is strange that they are not recorded fully in company's balance-sheets. This is because intangible assets are difficult to value and measure (Goldfinger, 1997; Sveiby, 1997; Lonnqvist, 2004; Gu and Wang, 2005; Austin, 2007; Corrado *et al.*, 2012). The future benefits of intangible assets are considered uncertain (Holland, 2001). Furthermore, intangibles are difficult to acquire, develop, and replicate within a firm (Itami, 1987). For the same reasons, they are also difficult to understand and for others to imitate (Dierickx and Cool, 1989; Nelson, 1991). Also, the property rights on intangible assets like Intellectual capital etc. are complex (Gu and Wang, 2005). Actually, intangible assets have unusual measurement and recognition feature that makes them difficult to develop a comprehensive accounting standard that recognizes and measures them exactly (Austin, 2007). As a result economic rents, growth opportunities, and other factors associated with intangible assets are not fully captured in the accounting systems.

A good deal of papers exploring the impact of Intangible assets on the performance is found in literature (Firer and Williams, 2003; Hall and Oriani, 2006; Sahay and Pillai, 2009; Ehie and Olibe, 2010; Kundu *et al.* 2010; Boujelben and Fedhila, 2011). But the literature on the level of investment in intangible assets remains scanty. The present paper attempts to measure the extent of investment in intangible assets by Indian companies and prove their importance in the present times. Based on a sample of 346 companies, the study uses Sveiby (1997) model and brings out the growing significance of Intangible Assets. This paper is divided into five sections; the

first section introduces the subject; the second section covers review of literature. Research methodology is part of the third section. Results and analysis are discussed in section four, and section five brings out the findings of the study and concludes the paper.

2. Review of Literature

Intangible assets hold primacy in this era of innovation and R&D. It has thus become imperative for companies to invest in Intangible Assets. Few authors have tried to study the extent of level of investment in Intangible Assets.

Ark *et al* (2009) through a survey of European Countries and US measured the level of investment in intangibles for a period of twelve years i.e. 1995-2006. They defined intangible assets as computerized information, innovative property, and economic competencies. The highest investment was made in US private sector in 2006 at 11.5 per cent of GDP, followed by UK with an investment of 10.5 per cent, followed by Germany at 7.2 per cent, France at 7.9 per cent, and Spain at 5.5 per cent and Italy at 5 per cent. Overall, the study concluded that investment in intangible assets had increased and showed an upward trend. Similar concept was studied by Baldwin *et al* (2009) in the Canadian business sector for a period of twenty years i.e. 1981-2001. They divided intangible assets into three categories as, total sciences- software, Purchased science and engineering, own account science and engineering and R&D and advertising and mineral exploration. The paper found that total growth in intangibles was 8.2 per cent which was more than that of tangible assets at 5.2 per cent only. Al-Twajry (2009) took a sample of 384 Japanese manufacturing firms for two years i.e. 2001 and 2005 to study the investment pattern of intangible assets. The results showed that the mean of intangible assets increased greatly from ¥2.36 million in 2001 to ¥4.35 in 2005. The total percentage increase in the mean was 85 per cent even though there was great variation from company to company. In the same year Barnes and McClure (2009) conducted a survey of the Australian economy for a long period of thirty one year's i.e. 1975-2006. Intangible assets were categorized as computerized information, innovative property (including R&D) and economic competencies (including firm-specific human capital and organizational capital). They found that intangible investment was almost half the size of tangible investment in the market sector of the Australian economy. Corrado *et al* (2009) studied the level of investment in intangible capital in the economy of US from 1995-2003. The intangible assets were classified as investment in computerized information, innovative property and investment in economic competencies. The results showed that the investment in computerized information was 511.9 billion dollar and in innovative property 1786 billion dollar. The total investment in economic competencies was around 1337 billion dollars. Further, the results indicated that total investment in intangibles had grown rapidly over the period of time. Also, Fukao *et al* (2009) aimed at measuring intangible investment of 108 Japanese industries for a period of five years i.e. 2000-2005. The results stated that the average annual amount of investment in intangible was 53 trillion yen from 2000-2005. Moreover, the ratio of intangible assets to tangible assets was 0.6 times the level of tangible assets. Similarly, Awano *et al* (2010) carried out a survey of 2004 UK private sector firms. The

survey covered wide range of spending on intangibles as training, software, branding, design and business process. The results of the survey stated that overall spending on intangibles was around £39bn of which the spending on software was £11bn, branding £10bn, R&D £10bn, training £7bn and design and business process improvement £1bn each. Overall, the findings proved that the UK firms spent significant amount on intangibles. Crass *et al* (2010) studied investment in intangible assets for a period of seventeen years i.e. from 1991 to 2007 and conducted a survey of German Industries They divided intangible assets into three categories: Computerized Information, Innovative Property and Economic competencies. The results of the survey indicated that investment in software showed more than double increase from 8 bn € to 18 bn € in 2007. Also, Baldwin *et al* (2012) worked on a time period of thirty three years i.e. 1976-2008 to explore the level of investment in intangible assets in Canadian business sector. The intangible assets were divided into three categories: computerized software, innovative property and economic competencies. The paper found that total investment in intangibles increased from \$6 billion in 1976 to \$150 billion in 2008. Furthermore, the ratio of intangible investment to tangible investment increased from 0.23 per cent in 1976 to 0.66 per cent in 2008. Overall, the intangible assets had shown a significant growth over the period of study. Masayuki (2012) also carried out a survey of Japanese firms for a period of four years i.e. 2006-2009. The results stated that ratio of intangible investments to fixed tangible assets was 15.2 per cent on an average from 2006-2009. Falk (2013) conducted a survey of 27 European Union countries for a period of nine years i.e. 2003-2011. The results showed that the share of intangible assets was more than that of the tangible assets. The intangible assets in Canadian Sector were explored by Muntean (2013) for a period of eleven years i.e. 1998-2008. The results stated that in 2008 Ontario business companies spent 51.6 billion dollars on intangibles which was 22.2 billion dollar more than the expenditure on intangibles in 1998. Field and Franklin (2012) carried out a survey of private sector firms of England, Wales, Scotland, North Ireland and UK through questionnaires. The intangible assets were grouped into six categories: training, Software, reputation and branding, R&D, design and business process improvement. The response to the relevance of investment in intangibles was not convincing. The results indicated that overall expenditure on six categories was around £33 bn in 2011 which was 15 per cent lower than that in 2008. Only training showed a rise of 3.5 per cent in comparison to 2008. R&D showed the highest fall in spending which was around 40 per cent. Generally, the results affirmed that the investment in intangible assets had decreased as compared to 2008.

Research gap identified

The review of literature suggests that Investment in Intangible Assets is being favoured by companies over years as majority of the studies show that the investment in Intangible Assets is increasing (Ark *et al*. 2009; Baldwin *et al*. 2009; Corrado *et al*. 2009; Fukao *et al*. 2009; Awano *et al*. 2010; Baldwin *et al*. 2012; Falk, 2013; Muntean, 2013; Crass *et al*. 2015; Morikawa, 2015). Also the level of investment in intangible assets has been studied by several authors globally. Some of them have conducted country based studies (Ark *et al*,

2009; Awano *et al*, 2010; Crass *et al*, 2010; Field and Franklin, 2012; Masayuki, 2012; Falk *et al*, 2013), while only a few of them have studied it firm wise (Baldwin *et al*, 2009; Al-Twaijry, 2009; Baldwin *et al*, 2012; Muntean, 2013). Also majority of the studies have been conducted by the developed nations (Ark *et al*, 2009 (European Union); Baldwin *et al*, 2009 (Canada); Al-Twaijry, 2009 (Japan); Awano *et al*, 2010 (UK); Baldwin *et al*, 2012 (Canada); Masayuki, 2012 (Japan). Not even a single study was found that studied the extent of investment made by companies in developing nations. Developing nations are always an attractive hub for foreign investments. These investments bring in huge capital, technological knowledge and employment. Also these investments give impetus to manufacturing and production sector. Developing country like India has a large potential for these investments because of its specialisation in services, skilled and inexpensive labour force and market for millions of inhabitants. Hence the present study is being conducted on Indian companies on extent of investment in intangible assets, presenting a modest attempt to fill the existing gap.

3. Research Methodology

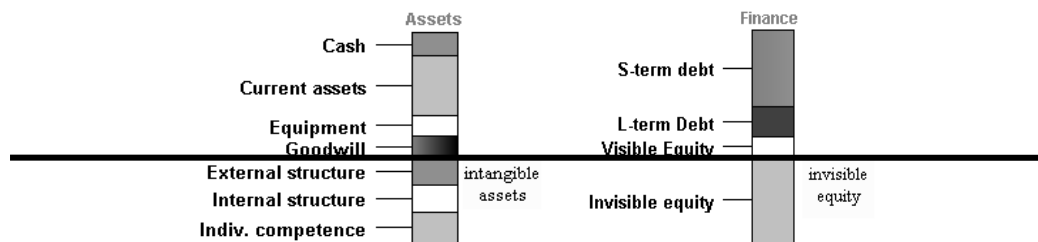
The sample consists of 346 Indian companies selected from BT- 500 on the basis of market capitalization. The companies belonging to Public sector and banking and financial sector have not been included. Also the companies which do not exist during the total study period have been left out. Further, the

companies for which the requisite data is not available are eliminated. Hence, an effective sample of 346 companies is obtained after applying the above filters. The study is undertaken for a period of twelve years from 2000-2001 to 2011-12. Intangible assets need some time to grow, therefore a span of more than a decade is used. This would be helpful to establish consistency and predictability of research conclusions. The relevant data has been extracted from PROWESS, a database of Center for Monitoring Indian Economy (CMIE). Annual reports of respective companies have also been reviewed wherever found necessary.

Measurement of Intangible Assets

The Intangible Assets in the study have been measured using ‘Intangible Asset Monitor Method’ developed by Karl- Erik Sveiby in 1997. Under this method, intangible assets are measured as the difference between the Market Value and the Book Value of Equity from the liability side of the Balance Sheet and for its counterpart the intangible assets are divided into three parts as External Structure (brands, customer and supplier relations); Internal Structure (the organization management, legal structure, manual systems, attitudes, R&D); and Individual Competence (education and experience). Sveiby (1997) also proposes that market value of a company is a direct reflection of the Invisible Balance Sheet of the company. The same can be presented as in Figure 1 as follows:-

Figure 1
The Invisible Balance Sheet



Source: Sveiby, 1997

Thus, Sveiby (1997), through his well-defined and robust model helps to divide intangible assets broadly into two categories as (1) Visible intangible assets; those that can be seen in the Balance Sheet and are quantified in monetary terms and may vary from goodwill, patents, licenses, other intangible assets and copyright etc. (2) Invisible Intangible Assets; those that can be seen as the excess of market value over the book value of a company. These assets form a part ‘under the surface’ in the Balance Sheet (Sveiby, 1997). Thus the model attaches a monetary value even to the Invisible Intangible Assets of a company. Not only this, the model also helps to control these assets and serves as a beacon-light to the

academicians, corporate leaders and researchers in valuation of intangible assets.

Tools and Techniques used:

For analyzing the extent of investment in Intangible Assets for a period of twelve years from 2000-2001 to 2011-2012, averages have been used. For measuring the growth in investment in Intangible Assets, growth rate has been calculated. The following formula has been used for calculating the growth rate.

$$GrowthRate = \frac{CurrentYearIntangibleAssets - PreviousYearIntangibleAssets}{PreviousYear Intangible Assets} \times 100$$

In order to examine the overall growth in Intangible Assets over the period of twelve years, Compounded Annual Growth

Rate (CAGR) has been calculated using SPSS 11.0 software. To estimate the Compounded Annual Growth Rate of the investment in Intangible Assets, the following Model was used:

$$\ln Y = \gamma + \beta t + U \quad (1)$$

Where

- Y = value of the variable;
t = time variable;
U = stochastic disturbance term.

The compounded growth rate is worked out with the following formula:

$$r = (\text{Antilog} \beta^{\wedge} - 1) \times 100 \quad (2)$$

Where β^{\wedge} is the Ordinary Least Square of β in Model (1).

4. Results and Discussions

As per the Intangible Asset Monitor Method, the intangible assets are divided into two categories as (1) Visible Intangible Assets and (2) Invisible Intangible Assets. The Visible Intangible Assets comprise of those assets that are reported by the companies and are given in the Balance Sheet and these may include goodwill, software and other intangible assets (patents, copyrights, licenses etc). The Invisible Intangible Assets are calculated as the difference between the market value of equity and the book value of equity. This difference is termed as Invisible equity (Sveiby, 1997) and is represented by External Structure, Internal Structure and Individual Competence. The extent of investment and growth in Intangible Assets is studied for a period of twelve years from 2000-2001 to 2011-2012. The same is presented in Table 1 as follows:

Table1
Investment in Intangible Assets

Year	Investment in Visible Intangible Assets (in millions)	Growth Rate (per cent) (Visible Intangible Assets)	Investment in Invisible Intangible Assets (in millions)	Growth Rate (per cent) (Invisible Intangible Assets)	Investment in Total Intangible Assets (in millions)	Growth Rate (per cent) (Total Intangible Assets)	Proportion of Intangible Assets to Tangible Assets (per cent)
2001	60.45486	-	4600.689	-	4661.144	-	8.52
2002	96.72629	59.99753	5068.623	10.17095	5165.349	10.8172	10.01
2003	104.9744	8.527305	3149.734	-37.8582	3254.708	-36.9896	12.92
2004	105.3225	0.331609	10148.16	222.191	10253.48	215.0353	14.93
2005	167.5217	59.05592	15942.98	57.10222	16110.5	57.12229	17.93
2006	169.4299	1.139047	33599.05	110.7451	33768.48	109.6054	18.99
2007	196.3904	15.91248	36216.1	7.789052	36412.49	7.82981	22.09
2008	210.1541	7.008367	44981.02	24.20174	45191.18	24.10901	23.64
2009	231.2799	10.05251	15651.94	-65.2032	15883.22	-64.8533	25.52
2010	310.2742	34.15526	48283.76	208.4841	48594.03	205.9457	26.91
2011	755.9132	143.6275	55516.81	14.9803	56272.72	15.80171	30.56
2012	825.5749	9.21557	49097.36	-11.5631	49922.93	-11.284	31.53
CAGR (per cent)	-	23.12*	-	28.65*	-	28.53*	-

* Significance at 1 per cent level

Source: Author's own calculations

As seen in Table 1, the average investment by the companies in Visible Intangible Assets is 60.45 million in the year 2001 and it rose to 96.72 million in the year 2002 showing a growth of 59.99 per cent. In the year 2003, the average investment by companies increased to 104.97 million with a growth rate of 8.52 per cent. Then a meager increase in investment is seen at an average of 105.32 million in the year 2004 showing a scanty growth of 0.331 per cent. Then the companies invested exorbitantly in Visible Intangible Assets taking up the figure to 167.52 million in 2005 and 169.43 million in 2006. The growth also shot up and reached 59.05 per cent in 2005. However, in the year 2006 a small increase in the growth rate of 1.13 per cent is seen. In 2007 again the mean investment in Visible Intangible Assets rose up to 196.39 million showing a growth of 15.91 per cent as compared to the year 2006. Similarly the average investment in 2008 was 210.15 million and a growth of 7 per cent was observed. Furthermore, the investment jumped to 231.27 million, showing an increase in growth rate by 10.05 per cent in 2009 and the same reached to

34.15 per cent in 2010 with an average investment of 310.27 million. In 2011 the investment in Visible Intangible Assets accelerated tremendously to 755.91 million and the growth rate mounted to 143.62 per cent. It further rose to 825.57 million with a growth rate of 9.21 per cent. Overall, the investment in Visible Intangible Assets has shown a growing and a positive trend with a Compounded Annual Growth Rate (CAGR) of 23.12 per cent which is significant at 1 per cent level of significance.

Similarly, the average investment in Invisible Intangible Assets in the year 2001 is 4600.68 million and in 2002 the average investment increased and reached 5068.62 million thus showing a growth of 10.17 per cent. But in 2003 the investment declined to 3149.73 million and resultantly the growth also fell by 37.85 per cent. Then these investments paced up and reached 10148.16 million in 2004 and showed a huge growth of 222.19 per cent. The investment further increased to 15942.98 million with a growth rate of 57.10 per cent in 2005. An evident increase in the investment in Invisible Intangible Assets is seen

in the year 2006 when the figure rose to 33599.05 million with a growth rate of 110.74 per cent. Again in the year 2007 the growth rate in investment rose to 7.78 per cent with an average investment of 36216.10 million. A similar trend was seen in 2008 when the growth rate increased to 24.20 per cent with an average investment of 44981.02 million in the same year. However, the level of investment fell and dropped to 15651.94 million in 2009 and simultaneously the growth rate also fell to 65.20 per cent. But later on the investment increased significantly at 48283.76 million and the growth rate also reached 208.48 per cent in 2010. In the year 2011, the companies made a maximum investment of 55516.81 million in Invisible Intangible Assets and simultaneously growth rate also grew by 14.98 per cent. A meager fall in the investment in Invisible Intangible Assets was seen in the year 2012 with a mean investment of 4907.36 million leading to a decline in growth rate to 11.56 per cent. Overall, investment in Invisible Intangible Assets has grown from 4600.68 million in 2001 to 49097.36 million in 2012 on an average thus showing a Compounded Annual Growth Rate (CAGR) of 28.65 per cent which is significant at 1 per cent level of significance.

As seen in Table 1, the average investment in Total Intangible Assets was 4661.14 million in 2001 and it rose to 5165.34 million in 2002 showing a growth of 10.81 per cent. The investment fell to 3254.70 million and correspondingly growth rate showed a negative sign and fell by 36.98 per cent in 2003. Again, in 2004 the level of investment in Intangible Assets increased to 10253.48 million and showed a growth rate of 215.03 per cent. It further increased to 16110.50 million with a growth of 57.12 per cent in 2005. The investment in Total Intangible Assets increased massively with an average investment of 33768.48 million taking the growth rate up by 109.60 per cent in 2006 and it further grew by 7.82 per cent in 2007 with an average investment of 36412.49 million. The growth rate touched 24.10 per cent in 2008 with an average investment of 45191.18 million. However, the mean investment declined steeply to 15883.22 million in 2009 showing the growth at a negative sign of 64.85 per cent. But, again the average investment increased to 48594.03 million in 2010 showing a growth of 205.94 per cent. Thereafter the investment increased and reached 56272.72 million with a growth of 15.80 per cent in 2011. However, the average fell to 49922.93 million, lowering the growth to a negative of 11.28 per cent in 2012. Overall the Total Intangible Assets have grown on an average thereby depicting a Compounded Annual Growth Rate (CAGR) of 28.53 per cent which is significant at 1 per cent level of significance.

Table 1 also shows the proportion of Intangible Assets to Tangible Assets. The ratio of Intangibles Assets to Tangible Assets has shown an increasing trend being 8.52 per cent in 2001 and gradually rising to 31.53 per cent by the end of the study period under consideration i.e. 2012. The ratio increased at a constant rate of approximately 2 per cent till 2004 being 10.1 per cent, 12.92 per cent and 14.93 per cent in 2002, 2003 and 2004 respectively. In 2005 the proportion of Intangible Assets to Tangible Assets was 17.93 per cent. This ratio increased to 18.99 per cent in 2006 to 22.09 per cent in 2007 and further rose to 23.64 per cent in 2008. It again showed an upward trend and reached 25.52 in 2009 and further to 26.91 per cent in 2010. The proportion again gathered pace and

touched 30.56 per cent in 2011 and reached 31.53 per cent in 2012. The results overall revealed that the ratio of Intangible Assets to Tangible Assets is increasing at a progressive rate, depicting the positive attitude of the Indian companies towards investment in Intangible Assets.

As is evident from the results, the companies are investing in 'Visible Intangible Assets' and resultantly these have shown a positive growth rate throughout twelve years' time period under consideration. Since 1991, Indian companies had opened their economy and as per the needs of Liberalization, Privatization and Globalization, they had invested in softwares, entered into mergers and purchased patents, copyrights and licenses. Trade Related Aspects of Intellectual Property Rights (TRIPS) became mandatory in 1995. Thereafter, the concept of 'branding' gained momentum and companies started taking copyrights and trademarks for their products to get themselves patented. This accelerated the investments in Intangible Assets that are restored in 'Other Intangible Assets' in the Balance Sheet of the companies. The practice of mergers and acquisitions came in vogue. It was used as a strategic tool to counter competition from foreign rivals. This resulted in acquisition of trademarks, patents, copyrights and goodwill. The same is quite evident from the hiked growth of Visible Intangible Assets from 34.15 per cent in 2010 to 143.62 per cent in 2011. Infact, India's targeted mergers and acquisition deal grew by 43 per cent in 2010 (Rewari, 2011). The transition from 'Swadeshi' environment to an open and liberalized economy took more than a decade for the Indian companies. Realizing the benefits of privatization and globalization they seemed to have expedited their investment in Intangible Assets.

Results also suggest that the investment in Invisible Intangible Assets has grown as the average investment in Invisible Intangible Assets shows an increase in majority of the years. CAGR also stands at 28.65 during the period of twelve years. The Invisible Intangible assets are 'under the surface' assets (Sveiby, 1997) that cannot be seen with a naked eye and are not visible in the Balance Sheet of a company. These assets show their presence by affecting the market price of a company's share. These are infact represented by a company's investment as the difference between the Market Value of a firm and the Book Value of a firm as seen on the 'under the surface' of liability side of the Balance Sheet with their counterpart as 'under the surface' on the asset side of the Balance Sheet as investment in 'External Structure', 'Internal Structure' and 'Individual Competencies' (Sveiby, 1997).

Liberalization, Privatization and Globalization have brought hyper-competition amongst the companies. The companies are required to build healthy relationships with their customers in order to sustain their loyalty (Dick and Basu, 1994). Hence investment is made in activities related to Customer Relationship Management (CRM). In the contemporary times, the companies are spending exorbitantly on advertising. Advertisement is used as a strategic tool to propel their product and image. According to a report by IBEF (2015), Indian advertising industry is expected to be Rs. 63,000 crore by 2017. The Supply Chain Management (SCM) too is focused upon. Companies spend on sustaining relationships with the suppliers. The intangible benefits derived from the supplier relations lead

to enhanced customer satisfaction, standardization and increased business performance (Crandall *et al.* 2015). Branding too is in vogue. Brands are in fact important Intangible Assets that considerably influence the firm performance (Rao *et al.* 2004 and Morgan and Rego, 2009). Strong brands influence customer's decision making process and ensure that the premium price can be charged (Adamson, 2007). Therefore all these factors help the companies to solidify their 'External Structure'-an important component of 'under the surface' assets namely Invisible Intangible Assets.

Similarly, an opportunity or a threat can be capitalized only if a company is strong internally. For this, Indian companies are focusing on their R&D activities. In a report by Woo (2012), India's R&D intensity is getting close to 1 per cent of GDP in 2012 as against 0.8 per cent in 2007. The investment made in R&D helps the companies in delivering new products faster to the global market. Similarly, the companies also upgrade their technology, infrastructure and administrative systems to strengthen their 'Internal Structure' which is another vital component of Invisible Intangible Assets.

Last but not the least 'Individual Competencies' in term of human resource and skill of an organization is very important. In fact, human resource of an organization is the only animate asset that brings other factors of production into operation. Lot of expenditure is incurred by the companies in training and development of their work force. This enhances the knowledge, education and experience of employees and contributes to the value of business and hence reflects in the 'under the surface' proportion of the Balance Sheet and becomes prominent in the Market Value of the company. These assets in terms of 'External Structure', 'Internal Structure' and 'Individual Competencies' do not find place in the Balance Sheet of a company. Rather these are treated as revenue/ capital expenditure. But, as these assets affect the market price of a company's share, hence Sveiby (1997) rightly proposes that these be counted as the Invisible Intangible Assets.

However, a negative growth rate in Invisible Intangible Assets in certain years seems to be the effect of macro factors as inflation, global financial recession etc. which affect the market price of shares. Hence the average value of the Invisible Intangible Assets decreases.

Thus the overall results from Table 1 reveal that the Total Intangible Assets have increased with the passage of time. It evidently indicates that Intangible Assets are becoming more and more important for the companies and their owners. In 2003-2004, the Accounting Standard (AS) 26 on Intangible Assets made mandatory for the companies to report Intangible Assets in their Balance Sheet and hence the companies gave weightage to Intangible Assets. The Indian companies have begun to recognize the relevance of building and escalating these assets (Rewari, 2011). The Intangible Assets enhance the value of the company (Milberg and Arkblad, 2006). Even the proportion of investment in Intangible Assets to the Tangible Assets is indicative of the same. But, the CAGR over a period of twelve years is not very appreciable; suggesting that perhaps some companies are still operating on the traditional lines and

systems only by investing more in the tangible and physical assets rather than the Intangible Assets.

The results of the study commensurate with the findings of previous researchers like Ark *et al.* (2009); Falk (2013); Barnes and McClure (2009); Corrado *et al.* (2009); Fukao *et al.* (2009); Baldwin *et al.* (2012); Muntean (2013); Haskel *et al.* (2014); Crass *et al.* (2015) who proved that the investment in Intangible Assets has increased over the years. Also, the results are in corroboration with the findings of Fukao *et al.* (2009); Baldwin *et al.* (2012) and Falk (2013) that the proportion of investment in Intangible Assets to Tangible Assets has risen over the past few decades. But findings of Field and Franklin (2012) do not match with results of the present study as they showed that investment in intangibles is decreasing over the period of the study. Field and Franklin (2012) conducted a questionnaire based study that covered the private sectors of UK, Scotland, Wales and North Ireland. India being a developing country needs to focus more on investments like these in intangibles. Hence the generalization of the results is slightly difficult.

5. Conclusion

Investment in intangible assets has become a key factor for companies around the world to gain competitive advantage. These have become an important driver for the growth of companies' and their success. In fact, these are the assets that determine market value of a company's equity and position it in the global capital market. Though the results of the present paper indicate a positive attitude of Indian managers towards investment in intangible assets, still more efforts and increased level of investment is required which would further add to the profile of Indian companies. This would certainly help them to strengthen their position at the international level. The study also expects accounting standard setters to show a gross concern towards the issues related to Intangible Assets. It highlights the need to recognize Intangible Assets holistically in the financial statements of companies. There are many Intangible Assets such as Customer Relationship Management (CRM), Supply Chain Management (SCM), Work Related Knowledge, Entrepreneurial Spirit, Market Penetration, Intellectual Capital etc. that contribute to the performance of companies but these are still not recorded in the accounts of companies. Since the Intangible Assets are gradually gaining prominence, AS- 26 should develop an independent, transparent and intelligible accounting framework to report expenditure on Intangible Assets. The present study also implicates Government of India to encourage entrepreneurs to take up R&D Intensive projects so that more investment is undertaken in innovation and novelty. The Government should offer some direct incentives in the form of tax allowances, tax breaks and subsidies to the companies who indulge in investment in Intangible Assets. Investment in Intangible Assets needs to be made in lump-sum at a point of time while its recovery is slowly made over a period of time. Hence the Governmental support to the corporate sector is desirable. Last but not the least, the results of the present paper would motivate academicians and researchers to venture into unexplored aspects of Intangible Assets related to their identification, measurement and reporting. A small endeavour has been undertaken by researchers in the present study with

the hope that it would open vistas of knowledge and further research on the vital issue of Intangible Assets.

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