



Analysis of intangible assets disclosure in Indian sectors (information Technology, FMCG, oil and gas and transport equipment)

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Abstract

This paper propose is to find the Intangible Assets disclosure in Indian corporate sectors (information technology, transport equipment, FMCG and oil and gas). In this research found companies disclosed human capital more as compared to other like external capital, mandatory disclosure requirement and internal capital. Intangible assets disclosure was increased by Indian companies in every financial year (2006-07 to 2015-16). In attributing wise disclosure found number of employment, compensation of employee, intangible asset valuation, research project and distribution channels were most reported attribute which was disclosed by companies in their annual reports.

Keywords: intangible assets, content analysis

1. Introduction

Intangible assets are that assets, which are not, touched by human beings some intangible assets variable were used for research as well as classified variable based on the categories of intangible assets for example, number of employees and experience of employees is not touched by human beings. Moreover, four categories of intangible assets were selected for the research which is human capital, external capital, internal capital and mandatory disclosure requirement.

Every sector has a different number of companies and Attribute wise combine disclosure of 92 companies in four sectors was discussed in the second section. The intangible assets disclosure index consists of five main categories, out of which four relate to voluntary intangible assets disclosure and one relate to disclosure requirements as per Accounting Standard-26 on Intangible assets.

The extent of disclosure was measured in terms of attribute-wise disclosure, category-wise disclosure by applying intangible assets disclosure index to the annual reports of the sample companies in India for the years 2006-07 to 2015-16. This paper discuss intangible assets disclosure in four sectors (information technology, FMCG, oil and gas and transport equipment)

2. Review of literature

Omoye (2013) ^[4] investigated that service oriented industry , companies with forigen activities and older firm and profitably firm (Nigerian) was less intangible assets disclosure in annual reports. However, assets were highly significant related to firm with debt stakeholder as well as stakeholder interested in intangible assets but did not interest in firm leverage which was more important for intangible assets disclosure

Chander and Mehra (2014) ^[1] examined the level of disclosure of Intangible Asset information and showed that external

capital was the most disclosed Intangible Asset category.

Devalle *et al.* (2016) ^[2] examined that the only significant variable for all D score indexes was the weight of interests on revenues and this result was a unique feature of the Italian market where the role of the banking systems is more important than in other countries.

Kirtika and Mandeep Kaur (2016) ^[3] Showed that internal capital had the most disclosed category followed by External capital and Employee competence was the least disclosed category. Researcher found the level of Intangible assets as per the category wise, size wise, sector wise, element wise and company wise. The result showed that Intangible assets reporting was little and in narrow form. The external capital most reported category of Intangible assets. Among all sectors Information technology sector and Tata consultancy services limited was the maximum Intangible assets disclosure.

Paule zarowin (2017) ^[5] found that significant correlation between measuring of success and disclosure of material intangible. Intangible assets book value coefficient was higher than firm success (firm earning) was increased. Intangible assets had a negative and significant impact on firm earning

3. Objective

- To examine attribute wise disclosure of intangible assets
- To analysis attribute wise comparative analysis of intangible assets.

4. Research methodology

4.1 Research Design in Study

In this research study empirical research design used.

4.2 Scope of the Study

The study focuses on the disclosure and critical analysis of Intangible Assets in Indian corporate sectors (information technology, oil and gas, FMCG, transport equipment). The

study is undertaken attribute wise comparative analysis of Intangible Assets

4.3 Sample size

For this analysis four sectors selected from BSE-500 index. Top nineteen two companies selected from four sectors Top Twenty two companies selected from transport equipment sector and 20 companies selected from oil and gas sector which companies did not annual report are not included. 25 companies selected from Information technology and FMCG sectors total 92 companies selected for research. Data for these companies analysed from financial year 2006-2007 to 2015-16. The data related to the study collected from secondary sources such Websites and annual reports selected companies.

4.4 Research tools

Content analysis used for finding the disclosure of intangible assets Intangible Assets disclosure index used for assign Intangible Assets scores based on qualitative or quantitative information in the annual reports.

The intangible assets information was assigned scores (0 or 1 or 2) on the basis of its qualitative or quantitative nature which is given in table 1 below. Past research shows that the same scoring technique has been used in studies in India (Chander and Mehra, (2011) ^[1].

Table 1: Scoring of various attributes of Intangible Assets.

Information Category	Score Assigned
Information in quantitative form	2
Information in qualitative form	1
No information	0

Table 1 shows scoring technique has been used for all attributes in all categories of intangible assets. If companies has provided information in qualitative from than sign a score ‘1’, if companies shows attribute in quantitative than sign

score 2. Disclosure score has sign ‘0’ if the requirement was not satisfied. This is because these attributes are all qualitative and only their presence or absence has been studied in the annual reports.

5. Data Analysis

The attribute wise analysis is every category of Intangible Assets Disclosure Index. 92 companies used for Intangible Assets disclosure. Table 5.1 presents the attribute-wise disclosure both in absolute figures as well as in percentages for the years 2006-07 to 2015-16 a respectively. The attribute-wise disclosure score calculated for each attribute which are in the Intangible Assets Disclosure Index, by dividing the total WDS attained for that attribute with the maximum weighted disclosure score.

The highest weighted disclosure score of human capital, external capital, internal capital and mandatory requirements category was 184 (92 companies multiply by maximum score 2)

For example, number of employee attribute of human capital category for the year 2006-07 was weighted disclosure score of 95 and the percentage disclosure of 51.63% (score attained 95 divided by 184 maximum disclosure score multiply by 100).

5.1 Human capital

This category disclosed information related to employee working skills salaries and qualification and experience of employees. It was represented the information related to how many employees perform work in companies and compensation were provided to employees by companies. In this research this categories was divided into seven sub attributes which disclosure score was disclosed in table 2.

WDS = weighted disclosure score

% DS = % disclosure score

Table 2: attributes wise disclosure score of human capital

Attribute	2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		
	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	
Employee																					
Number	95	51.63	101	54.89	100	54.34	100	54.34	112	60.86	120	65.21	120	65.21	130	70.65	134	72.82	134	72.82	
Gender	30	16.30	35	19.02	32	17.39	35	19.02	41	22.28	53	28.80	66	35.86	75	40.76	99	53.80	109	59.23	
Professional qualification	63	34.23	61	33.15	65	35.32	60	32.60	61	33.15	62	33.69	61	33.15	64	34.78	66	35.86	67	36.41	
Experience	109	59.23	105	57	114	61.95	108	58.69	109	59.23	106	57.60	105	57.06	108	58.69	116	63.04	115	62.5	
Compensation	96	52.17	102	55.4	101	54.89	104	56.52	104	56.52	109	59.23	106	57.60	107	58.15	112	60.86	119	64.67	
Training and Development	73	39.67	75	40.7	80	43.4	81	44.	90	48.91	93	50.54	97	52.71	101	54.89	102	55.43	106	57.60	
Work related Knowledge	54	29.34	56	30.43	57	30.97	59	32.06	66	35.86	76	41.30	76	41.30	79	42.93	81	44.02	84	45.6	

Number of employees was first most reported attributes of human capital. 51.63% numbers of employees were disclosed by companies in 2006-07. Numbers of employees were shown how many employees do work under organization. In 2007-08 to 2009-10 it disclosure score was reached to 54.34% in these years employees disclosure score remained stable. 60.86% number of employees disclosed in year 2010-11. In financial year 2011-12 and 2012-13 it achieved 65.21% disclosure score. 70.65% information related to this attributes disclosed by companies in 2013-14. Companies disclosed 72.82%

number of employee in financial year 2014-15 and 2015-16 (Halim and Jaafer (2012) found number of employee has maximum disclosure score in financial year 2007-08).

Gender of employees is another attribute of human capital it represent information related to sex (male and female) of employees whose perform work under the organization this attributes provided information regarding how many of women and men work under the companies. In financial year 2006-07 it disclosed 16.30% gender attribute and in year 2007-08 2009-10 it disclosure score it reached to 19.02%. But,

in financial year 2008-09 it declined. In next year improved gender disclosure score it got 22.28% and 28.80% disclosure score in year 2010-11 and 2011-12. Company’s disclosure 35.86% and 40.76% information related to gender of employee in financial year 2012-13 and 2013-14. Its disclosure score reached to 53.80% and 59.23% in financial year 2014-15 and 2015-16.

Professional qualification is another intangible assets attribute of human capital its provided information related to education of employees. Companies disclosed it in qualitative nature in their annual reports. In 2006-07, professional qualification was 34.23% disclosed score. 2007-08 and 2008-09 it reached to 33.15% and 35.32% respectively. In 2009-10, it declined. But, in 2010-11 and 2012-13 it achieved 33.15% disclosure score. Companies disclosed 34.78% and 35.86% information related to qualification of employees in financial year 2013-14 and 2014-15. In 2015-16 it got 36.41% disclosure score.

Experience of employee is another attribute of human capital it provided information related to field work experience of employee it disclosure score 59.23% and 57% in financial year 2006-07 and 2007-08.companies disclosed 61.95% and 58.69% information related to experience of employee in 2008-09 and 2009-10 respectively. In financial year 2009-10 its disclosure score was 59.23%. Its disclosure score declined in 2010-2011 and 2011-12 it achieved 57.60% disclosure score. Disclosure score related to experience of employee again reached to 58.69% in year 2013-14. It achieved 63.04% and 62.5% disclosure score in financial year 2014-15 and 2015-16.

Compensation of employee was a second most reported attribute of human capital compensation was given to employee in two ways in financial and non-financial. Compensation made better performance of employee and it aid to employee motivation. Disclosure score of compensation 52.17% and 55.4% in year 2006-07 and 2007-0. In financial year 2008-09 compensation disclosure score declined it reached to 54.89% and it little improved by companies in

2009-10 and 2010-11 it disclosure score 56.52%. Companies disclosed 59.23 % and 57.60% compensation variable in 2011-12 and 2012-13. In financial year 2013-14 and 2014-15 companies disclosed 58.15% and 60.86% information regarding to compensation. In 2015-16 its disclosure score reached to 64.67% companies disclosed this attributes in both qualitative and quantitative nature.

Training and development attributes are very important attributes for growth of companies it improved the employee skill and knowledge. In 2006-07 and 2007-08 disclosed 39.67% and 40.7% training and development attribute. It increased in every financial year 2006-07 to 2015-16. It disclosure score reached to 43.4% and 44% in 2008-09 and 2009-10. It achieved 48.91% and 50.54% disclosure score in financial year 2010-11 and 2011-12. Companies disclosed 52.71% and 54.89% in their annual reports in financial year 2012-13 and 2013-14. In 2014-15 and 2015-16 it achieved 55.43% and 57.60% disclosure score.

Work related knowledge disclosure score was 29.34% in year 2006-07 and it achieved approximately 30% disclosure score in 2007-08 and 2008-09. Companies disclosed 32.06% and 35.86% information related to this variable in financial year 2009-10 and 2010-11. In year 2011-12 and 2012- 13 it got nearly 41% disclosure score (kirtika and Manpreet (2016) [3] found company disclosed 46%work related knowledge attribute in their annual report). It was reached to 42.93% and 44.02% in financial year 2013-14 and 2014-15. Companies improved its disclosure score in 2015-16 it achieved a 45.6% disclosure score.

5.2 External capital

External capital was divided into sub intangible assets attributes which included into external capital these attributes are brand and their description, distribution channels, customer satisfaction, market share, business collaboration no and social activities.

Table 3: Attributes wise disclosure of external capital

Attribute	2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16	
	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS
Brand and their Description	43	23.36	47	25.54	49	26.63	49	26.63	49	26.63	53	28.80	58	31.52	59	32.06	59	32.06	58	31.52
Distribution channels	65	35.32	66	35.86	76	41.30	76	41.30	79	42.93	82	44.56	86	46.73	89	48.36	95	51.63	95	51.63
Customer satisfaction	40	21.73	38	20.65	43	23.36	48	26.08	46	25	43	23.36	49	26.63	51	27.71	55	29.89	56	30.43
Market share	66	35.86	58	31.52	73	39.67	78	42.39	83	45.10	81	44.02	89	48.36	85	46.19	87	47.28	94	51.08
Business collaboration	51	27.73	55	29.89	53	28.80	57	30.95	68	36.95	65	35.35	66	35.85	70	38.04	74	40.21	79	42.93
Social activities	38	20.65	41	22.28	28	26.08	52	28.26	59	32.06	68	36.95	73	39.67	84	45.65	97	52.71	104	56.52

Brand improved the market of companies and strong brand increased sales of companies as well as improved the growth of companies. Companies disclosed 23.36% and 25.54% information related to this attribute in 2006-07 and 2007-08. Companies improved it disclosure score in financial year 2008-09 to 2010-11 it was reached to 26.63%. It got 28.80% and 31.52%disclosure score in year 2011-12 and 2012-13. Companies disclosed 32.06% information related to this variable in 2013-14 and 2014-15. In financial year 2015-16 it got 31.52% disclosed score.

Next attribute of external capital is distribution channels.it was very important role in organization. Distribution channels

used for transfer goods and services form its manufacture to its end user. It used for regular sales from one to other places. These channels developed the few remaining places where companies could get competitive advantage. Companies disclosed 35.32% and 38.32 information related to distribution channels in year 2006-07 and 2007-08. Companies disclosed more information related to distribution channels in annual reports. In financial year 2008-09 and 2009-10 it achieved 41.30% disclosure score. But, in 2010-11 it disclosure score reached to 42.93%. Companies increased their disclosure score in 2011-12 and 2012-13 it reached to 44.56% and 46.73% respectively (Kirtika and Manpreet (2016) [3] found

companies disclosed 42% distribution channel in their annual reports). 51.63% information was disclosed by companies in financial year 2014-15 and 2015-16.

Companies focused to improve a good relationship with their clients who increased and improved product and services with faster delivery time and at lower price. Companies disclosed 21.73% and 22.28% information related to customer satisfaction in 2006-07 and 2007-08. Companies disclosed 23.36% it in 2008-09 and 2009-10. It disclosure score reached to 26.63 % in financial year 2010-11 and 2012-13. 27.71% information related to customer satisfaction disclosed in 2013-14. In financial year 2014-15 and 2015-16 its disclosure score reached to 29.89% and 30.4%.

Another attribute in external categories is market share. Percentage of all sales within market which was hold by one brand, product can be defined by the market share of company. Market shares help companies stakeholder to access their product, customer and strength .disclosure related to market share is 35.86% and 31.52% in year 2006-07 and 2007-08. In next year companies disclosed 39.67% and 42.39% information related to market share in 2008-09 and 2009-10. It disclosure score reached to 45.10% and 44.02% in 2010-11 and 2011-12 during this period were changing disclosure method few disclosed it in qualitative nature as compared to previous year. 48.36 % and 46.19% information related to market share disclosed by companies in 2012-13 and 2013-14 (Halim and jaafra (2012) found companies disclosed 4.2% market share in their annual reports) .. It disclosure score reached to 47.28% and 51.08% in 2014-15 and 2015-16. Companies improved disclosure score in every year.

Business collaboration is another attribute of external category. Business collaboration is collaborative agreement of organization with industry associates whose are conducting business and implement growth strategy. These are improving

organization performance as well as developed their business. In year 2006-07 and 2007-08 companies disclosed 27.71% and 29.89% information regarding business collaboration (this result related to study of Chandra and mehara in 2014). It disclosure score reached to 28.80% and 30.95% in 2008-09 and 2009-10. Companies disclosed it more in annual report in year 2010-11 and 2011-12 it disclosure score reached to 36.95 and 35.35%. Companies gave more preference to this intangible attribute companies disclosed it 35.85% and 38.04% in annual reports in 2012-13 and 2013-14. Last year 2014-15 and 2015-16 of data based its disclosure score reached to 40.21% and 42.9%.

Companies should do some contribution for community development and environment protection. Companies responsibilities for focusing on create healthcare center, education camps and income provide for development rural era through it companies can attract with investor, reduce risk related to quickly sales damage, with it companies can make their good press image. Disclosure related to social activities was 20.65% and 22.28% in 2006-07 and 2007-08 respectively. Disclosure related to social activities increased every financial year it did not decline. It disclosure score reached to 26.08% and 28.26 in 2008-09 and 2009-10. It improved in year 2010-11 and 2011-12 its disclosure score reached to 32.06% and 36.95%. In year 2012-13 and 2013-14 it disclosure score reached to 39.67% and 45.65%. Last year 2014-15 and 2015-16 of data based its disclosure score reached to 52.71 and 56.52%.

5.3 Internal capital

Internal capital was divided into sub four intangible assets attributes for this research which are included in internal capital. These attributes are research projects, corporate culture, Patent, trademarks.

Table 4: Attributes wise disclosure of internal capital

Attribute	2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16	
	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS
Research project	72	39.13	74	40.21	70	38.04	73	39.67	78	42.39	82	44.56	83	45.10	88	47.82	90	48.91	93	50.54
Corporate culture	42	22.82	40	21.739	48	26.08	49	26.63	52	28.26	60	32.60	60	32.60	67	36.41	71	38.58	75	40.76
Patent	22	11.95	26	14.13	27	14.67	29	15.76	34	18.47	38	20.65	37	20.10	46	25	38	20.65	45	24.45
Trademark	35	19.02	30	16.30	30	16.30	31	16.84	32	17.56	38	20.83	38	20.82	39	21.39	39	21.39	41	22.28

Research project is first most disclosure attribute of internal capital. it is life blood of organisation. Research project attributes help of business to innovating their product and services. It also improved sales and increasing the product profitability

Disclosure regarding to research project was 39.13% and 40.21 in 2006-07 and 2007-08. It reached to 38.04% and 39.67% in 2008-09, 2009-10. In financial year 2010-11 and 2011-12 it achieved 42.39% and 44.56% disclosure score. Companies improved in next year. 45.10% and 47.82% information related to research project was disclosed by companies of this sector in 2012-13 and 2013-14. It disclosure score reached to 48.91% and 50.54% in financial year 2014-15 and 2015-16.

Corporate culture was another attributes of internal capital this is provide information related to ethics, values, beliefs,

procedures and organisation environment.it was also defined companies rules, dress code, work environment, working hours. This attributes mostly disclosed in qualitative nature in annual reports of the companies. This attribute disclosed 22.82% and 21.73% in 2006-07 and 2007-08 respectively. Companies disclosed approximately 26% disclosure score in financial year 2008-09 and 2009-10 respectively. 28.26% information related to corporate culture was disclosed by companies in 2010-11. Its disclosure score reached to 32.60% in financial year 2011-12 and 2012-13. In financial year 2013-14 and 2014-15 it got 36.41% and 38.58% disclosure score. Companies improved their disclosure score in financial year 2015-16 it disclosure score reached to 40.76 % . (Chandra and mehara (2014)) found companies disclosed 7% corporate culture in financial year 2007-08.

Patent and trademarks another attributes of this categories.

Companies disclosed 11.95% and 14.13% information related to patents in 2006-07 and 2007-08. In financial year 2008-09 and 2009-10 it disclosure score reached to 14.67% and 15.76%. In year 2010-11, it reached to 18.47%. Companies disclosed nearly 20% information related to patents in year 2011-12 and 2012-13. In year 2013-14 and 2014-15 it disclosure score reached to 25% and 20.65% respectively. At 2015-16 patents was 24.45% disclosed by companies. Trademarks disclosure score was 19.20% 2006-07. In financial year 2007-08 to 2009-10 it reached to approximately 16%. Companies increased disclosure score in annual reports.17.56% was disclosed in 2010-11. In financial year 2011-12 and 2012-13 it achieved 20% disclosure score. But, some year companies changed it during change in nature of

disclosure trademarks disclosure score reached to 21.39% in 2013-14 and 2014-15. It disclosure score reached to 22.28% in 2015-16.

5.4 Mandatory disclosure requirements

Attributes which are included in mandatory disclosure requirements that are necessary for all companies for disclosing it disclosure score it was divided into sub attributes for this research that are details of amortization rate, method and carrying amount at end of period, classification of intangible assets, other disclosure like pledging information reason for amortizing over more than 10 year etc., intangible assets valuation.

Table 5: Attributes wise disclosure of mandatory disclosure

Attribute	2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		
	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	WDS	%DS	
Mandatory, Disclosure, Requirement																					
Details of amortization rate carrying amount at beginning and end of year	53	28.80	58	31.52	60	32.60	70	38.04	83	45.10	102	55.43	112	60.86	122	66.30	121	65.76	127	69.02	
Classification of intangible assets	43	23.36	44	23.91	45	24.45	47	25.54	59	32.06	68	36.95	72	39.13	72	39.13	72	39.13	76	41.30	
Amortizing of intangible assets more than 10 year	16	8.69	17	9.23	23	12.5	26	14.13	30	16.30	35	19.02	40	21.73	44	23.91	48	26.08	53	28.80	
Intangible assets Valuation	66	35.86	74	40.21	73	39.67	75	40.76	95	51.63	131	71.19	143	77.71	147	79.89	149	80.97	155	84.23	

Details of amortization rate, method and carrying amount at end of period was disclosed by companies in their annual reports in financial year 2006-07 ,8.80% was disclosed by companies. In financial year 2007-08 and 2008-09 it achieved 31.52% and 32.60% disclosure score. Companies provided 38.04% and 45.10% in financial 2009-10 and 2010-11. Companies increased their disclosure score in financial year 2011-12 and 2012-13 it got 55.43% and 60.86%. Its disclosure score reached to 66.30% and 65.76% in 2013-14 and 2014-15. Companies disclosed 69.02% details of amortization rate, method and carrying amount at end of period attribute in financial year 2015-16. Classification of intangible assets is another attribute of mandatory disclosure requirements. Its disclosure score nearly 23% in financial year 2006-07 to 2007-08. Companies was disclosed it 24.45% and 25.54% in year 2008-09 and 2009-10. In financial year 2010-11 and 2011-12 its disclosure score reached to 32.06% and 36.95%. Classification of intangible assets disclosure score was 39.13% in year 2012-13 to 2014-15. Companies disclosed 41.36% disclosure score in financial year 2015-16. Other disclosure like pledging information reason for amortizing over more than 10 year etc. is another attributes of mandatory disclosure requirements. It had a week disclosure

score means companies had less awareness related to this attribute. Its disclosure score 8.69% and 9.23% in 2006-07 and 2007-08. In financial year 2008-09 and 2009-10 it reached to 12.5% and 14.13%. In 2010-11 and 2011-12 it achieved 16.30% and 19.02% disclosure score. In years 2012-13 to 201314 it was 21.73% and 23.91% disclosure score. It was reached to 26.08% and 28.80% in 2014-15 and 2015-16 respectively. Intangible assets valuation is first most reported attribute of this category. Its disclosure score was 35.86% and 40.21% in financial year 2006-07 to 2007-08. Companies disclosed it 39.67% and 40.76% in financial year 2008-09 and 2009-10. Companies improved its disclosure score in 2010-11 and 2011-12 it was reached to 51.63% and 71.19% it was a huge variation in their disclosure score. In financial year 2012-13 and 2013-14 it achieved 77.71% and 79.89% classification intangible asset. In financial year 2014-15 and 2015-16 it got 80.97% and 84.23%.

5.5 Most reported attributes

Disclosure score of most reported attributes in each category in 2006-07 to 2015-16. Table shows those attribute which were a highest disclosure score in data based year.

Table 6: Table most reported attributes of intangible assets as per category

Category	2006-07			2007-08		
	Attributes	Weighted average disclosure score	% disclosure score	Attributes	Weighted average disclosure score	% disclosure score
Human capital	Experience of employee	109	59.23	Experience of employee	105	57
	Compensation of employee	96	52.17	Compensation of employee	102	55.4
External capital	Market share	66	35.26	Distribution channels	66	35.86
	Distribution channels	65	35.32	Market share	58	31.52
Internal capital	Research project	72	39.13	Research project	74	40.21
	Corporate culture	42	22.82	Corporate culture	40	21.73

Mandatory intangible assets disclosure	Intangible assets valuation	66	35.86	Intangible assets valuation	74	40.21
	Details of amortization rate carrying amount at beginning and end of year	53	28.80	Details of amortization rate carrying amount at beginning and end of year	58	31.52

Table 6: Continue

Category	2008-09			2009-10		
	Attributes	Weighted average disclosure score	% disclosure score	Attributes	Weighted average disclosure score	% disclosure score
Human capital	Experience of employee	114	61.95	Experience of employee	108	98.69
	Compensation of employee	101	54.59	Compensation of employee	104	56.52
External capital	Distribution channels	76	41.30	Market share	78	42.39
	Market share	73	39.67	Distribution channels	76	41.30
Internal capital	Research project	70	38.04	Research project	73	39.67
	Corporate culture	48	26.08	Corporate culture	49	26.63
Mandatory intangible assets disclosure	Intangible assets valuation	74	39.67	Intangible assets valuation	76	40.76
	Details of amortization rate carrying amount at beginning and end of year	60	32.60	Details of amortization rate carrying amount at beginning and end of year	70	38.04

Table 6: Continue

Category	2010-11			2011-12		
	Attributes	Weighted average disclosure score	% disclosure score	Attributes	Weighted average disclosure score	% disclosure score
Human capital	Number of employee	112	60.86	Number of employee	120	65.21
	Compensation	104	56.59	Compensation	109	59.23
External capital	Market share	83	45.10	Distribution channels	82	44.56
	Distribution channels	79	42.93	Market share	81	44.02
Internal capital	Research project	78	42.39	Research project	82	44.56
	Corporate culture	52	28.26	Corporate culture	60	32.60
Mandatory intangible assets disclosure	Intangible assets valuation	96	51.63	Intangible assets valuation	132	71.19
	Details of amortization rate carrying amount at beginning and end of year	83	45.10	Details of amortization rate carrying amount at beginning and end of year	102	55.43

Table 6: Continue

Categories	2012-13			2013-14		
	Attributes	Weighted average disclosure score	% disclosure score	Attributes	Weighted average disclosure score	% disclosure score
Human capital	Number of employee	120	65.21	Number of employee	130	70.65
	Compensation	106	57.60	Compensation	107	58.15
External capital	Market share	89	48.36	Distribution channel	89	48.36
	Distribution channel	86	46.83	Market share	85	46.19
Internal capital	Research project	83	44.56	Research project	88	47.72
	Corporate culture	60	32.60	Corporate culture	67	46.41
Mandatory intangible assets disclosure	Intangible assets valuation	142	77.71	Intangible assets valuation	148	79.89
	Details of amortization rate carrying amount at beginning and end of year	112	60.86	Details of amortization rate carrying amount at beginning and end of year	122	66.30

Table 6: Continue

Categories	2014-15			2015-16		
	Attributes	Weighted average disclosure score	% disclosure score	Attributes	Weighted average disclosure score	% disclosure score
Human capital	Number of employee	134	72.82	Number of employee	134	72.82
	Compensation	112	60.68	Compensation	119	64.67
External capital	Distribution channel	95	51.63	Distribution channel	95	51.63
	Market share	87	47.28	Market share	94	51.08
Internal capital	Research project	90	48.91	Research project	93	50.54
	Corporate culture	71	38.58	Corporate culture	75	40.76
Mandatory intangible assets disclosure	Intangible assets valuation	150	80.97	Intangible assets valuation	156	84.23
	Details of amortization rate carrying amount at beginning and end of year	121	65.76	Details of amortization rate carrying amount at beginning and end of year	127	69.02

Human capital companies disclosed three attributes more in financial year 2006-07 to 2009-10 experience of employee was a most reported attribute and after 2009-10 companies increased number of employee in their annual reports it was first most reported attribute in 2010-11 to 2015-16. Compensation of employee was a second most reported attribute in 2006-07 to 2015-16 (Chandra and mehara (2014)) In external capital distribution channels and market share was a highest disclosure score in all data based (2006-07 to 2015-16) year (Chandra and mehara, (2014)) market share was highest disclosure)

Research project and corporate culture was a most reported attribute in internal capital category in 2006-07 to 2015-16. (Chandra and mehara (2014) found research project was most reported attribute in 2003-04 and 2007-08)

In mandatory intangible assets disclosure category intangible assets valuation and details of amortization rate carrying amount at beginning and end of year was a most reported attributes in financial year 2006-07 to 2015-16 (Chandra and mehara (2014)).

6. Finding and Conclusion

- Assets wise disclosure of intangible assets compensation of employee and experience of employee was a most reported attribute in 2006-07 and 2009-10 it increased all data base year (2006-07 to 2015-16). In financial year 2010-11 to 2015-16 numbers of employees and compensation of employees was most reported attributed.
- External capital market share and distribution channels have a highest disclosure score in financial year 2006-07 to 2015-16.
- Internal capital research project and corporate culture was most reported attributed. Intangible Assets valuation and details of amortization rate carrying amount at beginning and end of financial year attributes have a highest disclosure score in financial year 2006-07 to 2015-16.
- The level of intangible assets disclosure is low in financial year 2006-07 as compared to financial year 2015-16. Companies increased intangible assets disclosure in every financial year in their annual reports
- Companies have a lack of awareness related to intangible assets disclosure in financial year 2006-07 to 2008-09 after that year companies improved intangible assets disclosure in their annual reports
- Companies disclosed unsystematic and unorganised intangible assets in annual reports. Maximum intangible assets found in management analysis section of companies annual reports
- During analysis found firstly companies disclosed maximum intangible assets in qualitative nature and during trend year companies were increasing awareness related intangible assets disclosure as well as change intangible assets disclosure pattern qualitative to quantitative

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