IMPACT OF INTELLECTUAL CAPITAL ON FINANCIAL PERFORMANCE IN INDIAN TEXTILE INDUSTRIES

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ABSTRACT

This paper has examined the impact of intellectual capital (IC) on financial performance of the Indian textile industry by using Public's Value-added intellectual capital coefficient (VAIC^{TM}) model. The study used profitability (ROA), productivity (ATO), and returns on equity (ROE) as the proxies for measuring firm's financial performance. The study selected the top 81 textiles companies on the basis of market capitalization. The results show that the IC efficiency has a significant and positive relationship with the profitability and Return on equity of the Indian textile industry and inconsequential impact on productivity. Whereas, among the IC components, capital employed efficiency (CEE) is the highly significant component that impact all the indicators of financial performance while human capital efficiency (HCE) only impacts on profitability. The study also found that structural capital efficiency (SCE) has insignificant impact on profitability, productivity, and return on equity of the textile industry in India.

Keywords: Intellectual Capital, Financial Performance, Textile Industry.

INTRODUCTION

Nowadays, Intellectual capital is treated as a powerful resource and a major contributor to the success and value creation in an organization. Intellectual capital is also known as an intangible value driver, which brings about future benefits to the organization. In the present market, competition between the organizations is very high and the buyers have become more informed and interactive. Also, in this dynamic market, business organizations need to make many strategic changes. At this time, sustainability of firm depends on the ability to change and willingness to adopt the changes in their organization (Chrisman et al., 2015). Through the efficient use of intellectual capital, a firm can able to manage their quick changes and achieve competitiveness in the markets. So many organizations believe that increasing intellectual capital becomes an easy source of achieving competitive advantage (Obeidat et al., 2017). Muwardi et al. (2020) also proves that a higher level of intellectual resources is considered as an important predictor of organizational performance.

In this global environment business, IC is one of the most prominent factors that create and develop competitive advantage in the organizations. Intellectual capital (IC) refers to the collective knowledge that is embedded with personnel, organizational routines, and network relationships of an organization (Stewart, 1997; Bontis & Choo, 2002; Kong, 2008). Many organizations recognized IC as an important resource for developing sustained competitive advantages (Schiuma & Lerro, 2008; To-nial et al., 2019; Gross-Golacka et al., 2020; Hermawan et al., 2020). Effective management of the knowledge and the intellectual capital (IC) of an organization leads to improve efficiency and reduce organizational consumption and help to

structural, organizational, and process changes (Wang & Chang, 2005). Many studies prove that the IC significantly affects the performance and competitiveness of the firm (Chen, 2009). But in the textile industries, research on intellectual capital management from an empirical perspective still seems to be very less.

Intellectual capital (IC) can be found as a group of intangibles such as resources, capabilities, and competencies that help to improve organizational performance and value creation (Roos & Roos, 1997; Bontis et al., 2000). According to the definition of Bukowitz and Williams (2000), IC is a dynamic way that creates non-material assets, which make to flows of knowledge and create goods. According to Ordóñez de Pablos (2004), IC is the difference between the company's market value and its book value.

All those definitions are differing from each other but they are not disqualifying each other. Most researchers state that intellectual capital is the effort of employees put into an organization in form of an intangible or invisible asset such as patents, trademarks, copyrights, and other results of human innovations and thought. All of these collectively (human, structural, and relational capital) determine the value of competitiveness of an organization.

The relationship of IC with financial performance is the main reason to attract most researchers (Inkinen, 2015; Xu & Liu, 2020). Under this study, the research tries to identify the contribution of intellectual capital in the textile companies by integrating the gap identified through the literature. The first intends to analyze the impact of intellectual capital on financial performance and the second intends to identify which components of IC are most influences on financial performance.

LITERATURE REVIEW

Definition of Intellectual Capital

The definition of IC depends upon the organization. Skandia Insurance Company defined intellectual capital as the possession of knowledge, applied experience, customer relationship, organizational technology, and professional skills which enhance competitive advantage to the firm in the industry (Sofie, 1999). This definition has been acknowledged by many researchers and scholars that IC is an important strategic asset for evaluating organizational performance in both developing and underdeveloped countries (Khalique et al., 2011; Ngah & Ibrahim, 2012). Choudhury (2010) further defined Intellectual capital as the economic value which includes three categories of intangible assets of an organization namely human capital, organizational capital, and physical capital respectively. Many strategic researchers and analysts argue that a firm can sustain competitive advantage only in the situations in which human and organizational, physical capital varies across the firms. An earlier study shows that intellectual capital is made with three pillars. These pillars are collectively known as components of intellectual capital. It includes:

1. Human capital
2. Structural capital
3. Customer capital

Human Capital

Human capital (HC) is the backbone of intellectual capital where it is the sum total of human attitudes elements which includes the skills, knowledge, experience, talent, creativity, and intuition of business people. In this sense, human capital does not mean that the firms may have

the right of ownership. However, the firm can use knowledge and skills that belong to individuals (Edvinson, 1997). The main objective of human capital is the need to create new products or services, and business process innovation. Rehman et al. (2011) defined human capital as the skill and creativity that belongs to the individual that can be further develop by investing more in their training programs. In simple, human capital is the experience and expertise of employees.

Structural Capital

Structural capital consists of corporate culture, internal communication, management information system, information technology, knowledge transfer, and product and process innovation. In other words, it is the concepts, models, patents, computers, and systems created by employees, yet owned by the organization (Akpinar & Akdemir, 1999). Alternatively, it may also be acquired elsewhere. Once the organization improve its technology, develops process and establishes other internal initiatives, will also improve structural capital. Therefore, structural capital refers to the ability of an organization to accommodate its customer's demands.

Customer Capital

Customer capital also known as relational capital or external capital which consists of customer relations, supplier relations, public relations, relationship to investors, owners and partners. According to Akpinar & Akdemir (1999), customer capital refers to the "*organization's relationships or network of associates and their satisfaction with and loyalty to the company*."

Intellectual Capital Disclosure in India

In this millennium, the intellectual capital assets move into the driver's seat of corporation's success. Successful companies are recognizing the need and importance of measurement and management of intellectual capital as these are intangible ones. There are a number of reasons for this change. Mainly, these companies accept that intellectual capital drives innovation. It is all about creating and developing new product and service ideas, improve processes, and help companies to create new sources of value (Choudhury, 2010). Kamath (2008) found that information and communication industries are widely followed the IC disclosure practice among the TecK firms whereas entertainment industries shows minimal IC disclosure practice among TecK firms. Joshi & Ubah (2009) found that reporting practice of intellectual capital in Indian knowledge companies are always negligible. He states that companies are not giving any preference or priority in reporting intellectual capital and also there is no mandatory guideline given by accounting bodies and the accounting profession of worldwide regarding the reporting of intellectual capital (Joshi et al., 2012). Bhasin (2015) also support this result by studying 16 Indian IT corporation. They conclude that Indian companies are lagging behind in the field of measurement, reporting, and disclosure of intellectual capital. Another study on the IT sector shows that firm has a sustainable advantage of using human, structural and physical capital (Choudhury, 2010).

Intellectual capital and financial performance

Sriranga & Vijay (2014) studied relationship of Intellectual capital and financial

performance of Indian pharmaceutical firms. The result indicates that intellectual capital has a positive relation with proxies of financial performance whereas customer capital does not demonstrate this effect. Another study in the pharmaceutical and textile industry found that intellectual capital is not a good predator for market valuation. They state that Indian investor does not consider intellectual capital while taking the investment decision (Joshi et al., 2012). Mojtahedzade et al. (2010) studied the performance of IC in 3100 small and medium-sized companies in Kenya. The results found that there is a significant positive relationship between intellectual capital and growth. Moh'd Khier Al Momani et al. (2020) demonstrate the impact of IC on firm performance in Jordan industrial sector during the period 2008–2017. Their result found that a positive relationship between IC and financial performance by using the predators of the market to book value and earnings per share. The components-wise result shows mixed findings. The study suggests that Jordan's industrial companies should give more attention to practical and knowledge experiences for enhancing the competitive advantage of the company and strengthen the expert employees in the organization. Similarly, Ahuja & Ahuja (2012) found that there is a positive relationship of intellectual capital and expected future performance of the Indian banking sector. According to Shakina & Barajas (2012), in their study of 752 Russian and European firms found that there is a significant positive relationship between the quality of intellectual capital efficiency and the proxies of financial performance of firms. Seo & Kim (2020) endowed that intangible re-sources such as human capital, advertising, and R&D have a significant and positive impact on values and profitability of Korean SMEs'

A study on Chinese SMEs sectors found that IC efficiency help to improve the performance of high-tech and non-high-tech SMEs (Xu & Li, 2019); similarly, a study about China's High- tech agricultural companies documented that human capital has significance positive influence on firm's sustainable growth (Xu et al., 2020). Kamath (2008) founds vital impact of human capital on ROA in Indian pharmaceutical sector; however, he also found that no significant relationship of human capital with productivity and market value. Further, Vishnu & Gupta (2014) established that HCE and SCE have a significant and positive association with ROA and return on sales in the pharmaceutical sector. In another study about Indian banks, Mondal & Ghosh (2012) stated that significant relationship of IC with productivity and profitability and their study concluded that IC plays a significant role in companies' competitive advantage. Vidyarthi (2019) found that larger investment in IC can increase operating efficiency and value creation of firm by studying 38 Indian banks. Smriti & Das (2018) tried to identify the effect of IC performance on Indian firms and found that human capital efficiency (HCE) has a significant impact on productivity, whereas SCE and CEE were equally contributing to firms' sales growth and market value. Momani and Nour (2019) identified the relationship of IC and the return of equity ratio (ROE) of Jordan commercial banks listed in Amman Stock Exchange (ASE) over the period 2010–2015. In their study, they found that IC has a significant negative impact on the ROE of commercial banks in Jordan. They suggest that commercial bank Jordan needs more investment in human capital. Similarly, Zhang et al (2021) made a comparative study on intellectual capital and financial performance in financial and Pharmaceutical Industries in Vietnam by using Value-Added Intellectual Capital (VAIC). The result found that VAIC and HCE have a significant positive impact on the financial performance of both industries by measuring ROA and ROE. Moreover, SCE has negative implications towards ROA and ROE respectively. The study also found that the impact of HCE on ROE and SCE on ROA is higher in the pharmaceutical industry compared to the financial industry.

Hence, previous studies indicate that the forward-looking on intellectual capital is a

means of both maintaining competitive advantage and improving survival capacity in today's global world (Khandekar & Sharma, 2005)

RESEARCH OBJECTIVE AND HYPOTHESIS

The objective of this study is to empirically assess the impact of IC and its components on financial performance of Indian textile industries. To assess this, the study used 10 years of data ranging from 2009-2010 to 2018-2019. Correlation and Ordinary Least Square (OLS) regressions have been used to check the impact of intellectual capital on the financial performance of textile companies in India.

Data Collection: the study collected data from the Prowess database, which is controlled by the Centre for Monitoring Indian Economy (CMIE). Initially the study selected sample of 88 textiles companies on the basis of market capitalization in the year 2018. After the final sorting, some companies were removed due to insufficient data and selected 81 textile companies as a sample.

Definitions of variable

Dependent Variables and Control Variables

To run the relevant analysis in the present study, three dependent variables such as return on assets (ROA), Asset turnover ratio (ATO) and return on equity (ROE) were used as proxy to measures companies' financial performance. The study Used controlling variables such as Debt equity ratio (DER), physical capital intensity (PC) and Market to book value (MB).
These variables were defined as:

Return on assets (ROA): This ratio used for measuring firm profitability. The equation for Return on assets is ROA = Operating income/ Total assets

Assets turnover ratio (ATO): This ratio used for measuring productivity. The equation for Assets turnover ratio is ATO =Revenue/ Total assets

Return on equity (ROE): This ratio used for measuring profitability by calculating how much profit a company earned by using shareholders fund
ROE = Net income/ Average net worth

Physical capacity (PC): Physical capacity indicates physical intensity of the firm. It is calculated as PC = Fixed assets/ Total assets:

Debt equity ratio (DER): This ratio used to measure the level leverage used by the firm. It means proportion of debt and equity to entire assets of the firm. It is calculated by DER= Total debt/ Total equity.

Market to book value (MB): It indicates market valuation of the firm. It calculated by using this formula, MB= Total market capitalization of 365 days/ Book value of commonstock

Independent variables

The value-added intellectual capital coefficient (VAIC^{TM}) method proposed by Ante Pulic (1998) for measuring the IC efficiency. According to Pulic's VAIC method help investors, management and other stakeholders to monitor and effectively evaluate the efficiency of value added in the firms. Companies with a higher VAIC indicate that they have a higher value creation by using all those components of IC. Following equation formalizes the VAIC^{TM} relationship algebraically:

$$VAIC^{TM} = HCEi + SCEi + CEEi$$

There are some method should followed to measure the efficiency of each capital. The first step is to measure the company's value added (VA). In accordance with the stakeholder theory (Riahi-Belkaoui, 2003) the VA is calculated as follows: Value Added = Output – Input Outputs refer the revenue which comprises all products and services sold on the market, while inputs are all the expenses which are incurred in producing the products or services.
VA can also expressed in

$$VA = I + DP + D + T + M + R + W = W + I + T + NI$$

Where,
I = Interest expenses, DP = Depreciation expenses, D = Dividends, T = Taxes paid, M = Equity of minority shareholders in net income of subsidiaries, R = Retained earnings, W = Wages and salaries, NI = Profits after taxes. As the VAIC^{TM} is sum of three components, they calculated as follows.

Human Capital Efficiency (HCE): it estimates the value added generated from one unit manpower investment. Here the expenses of employees are considered as an investment instead of cost and human capital considered as wages and salaries.

$$HCE = VA/HC$$

Where;
HCE = Human capital efficiency, VA = Value added, HC = Human capital.
Structural Capital Efficiency (SCE): it estimates the value added generated by the utilization of structural capital. Here SC calculated as VA - HC.
Then,

$$SCE = SC/VA$$

Where;
SCE = Structural capital efficiency, VA = Value added, SC = Structural capital.
Capital Employed Efficiency (CEE): it indicate the net worth of firm representing capital employed

$$CEE = VA/CE$$

Where;

CEE= Capital employed efficiency, VA= Value added, CE= Capital employed.

There has been some limitation of the VAIC^{TM} model, mainly by Andriessen (2004) who suggested that this method give dissatisfied result due to basic assumption problematic. However, large number of scholar are adopted and suggested this method is most appropriate for measuring IC (Chen et al., 2005; Kujansivu & Lonnqvist, 2007; Kamath, 2008; Chan, 2009)

Research Hypothesis

For achieving the above mentioned objectives. The researcher formulated following hypothesis.The studies have 3 Main hypothesis and followed sub hypothesis

H1: There is a significant positive association between profitability (ROA) and intellectual capital efficiency(VAIC).

H1a: There is a significant positive association between profitability (ROA) and human capital efficiency (HCE).

H1b: There is a significant positive association between profitability (ROA) and structural capital efficiency (SCE).

H1c: There is a significant positive association between profitability (ROA) and capital employed efficiency (CEE).

H2: There is a significant positive association between productivity (ATO) and intellectual capital efficiency(VAIC).

H2a: There is a significant positive association between productivity (ATO) and human capital efficiency (HCE).

H2b: There is a significant positive association between productivity (ATO) and structural capital efficiency (SCE).

H2c: There is a significant positive association between productivity (ATO) and capital employed efficiency (CEE).

H3: There is a significant positive association between Return on Equity and intellectual capital efficiency (VAIC).

H3a: There is a significant positive association between Return on Equity (ROE) and human capital efficiency (HCE).

H3b: There is a significant positive association between Return on Equity (ROE) and structural capital efficiency (SCE).

H3c: There is a significant positive association between Return on Equity (ROE) and capital employed efficiency (CEE).

Regression Models

Model 1, Model 3 and Model 5 examine the relationships between aggregate measure of IC (VAIC^{TM}) and ROA, ATO and ROE. Remaining models such as Model 2, Model 4 and Model 6 are used to analyze relationship of intellectual capital components to firms' ROA, ATO and ROE. These models are illustrated by the following regression equations. The regression equations are as follows:

Model 1 analyzes the relationship between the efficiency of IC (VAIC^{TM}) and profitability (ROA) of the Indian textile industry. This model examines the first hypothesis that H1 Model 1: $ROAit = \alpha + \beta1VAICit + \beta2DERit + \beta3PCit + \beta4MBit + \epsilon it$

Model 2 analyze the relationship of VAIC components and profitability (ROA) of the textile firms of India. This model explores the hypotheses H1a, H1b and H1c.
Model 2: $ROAit = \alpha + \beta1HCEit + \beta2SCEit + \beta3CEEit + \beta4DERit + \beta5PCit + \beta6MBit + \epsilon it$

Model 3 investigate the relationship between IC (VAIC^{TM}) and productivity (ATO) of the Indian textile companies, This model explores the hypothesis H2.
Model 3: $ATOit = \alpha + \beta1VAICit + + \beta2DERit + \beta3PCit + \beta4MBit + \epsilon it$

Model 4 identify the relationship between IC components and productivity (ATO) of the Indian textile industry. This model explores the hypotheses H2a, H2b and H2c.
Model 4: $ATOit = \alpha + \beta1HCEit + \beta2SCEit + \beta3CEEit + \beta4DERit + \beta5PCit + \beta6MBit + \epsilon it$

Model 5 analyzes the relationship between the efficiency of IC (VAIC^{TM}) and Return on equity (ROE) of the Indian textile industry. This model examines the first hypothesis that H3
Model 5: $ROEit = \alpha + \beta1VAICit + + \beta2DERit + \beta3PCit + \beta4MBit + \epsilon it$

Model 6 identify the relationship between IC components and Return on equity (ROE) of the Indian textile industry. This model explores the hypotheses H2a, H2b and H2c.
Model 6: $ROEit = \alpha + \beta1HCEit + \beta2SCEit + \beta3CEEit + \beta4DERit + \beta5PCit + \beta6MBit + \epsilon it$

The entire model is used controlling variables such as Debt equity ratio (DER), physical capital intensity (PC) and Market to book value (MB).

ANALYSIS AND INTERPRETATION

Table 1 Descriptive statistics										
	ATO	ROE	ROA	VAIC	HCE	SCE	SCE	PC	DER	MB
Mean	1.132	0.098	0.052	4.951	5.800	0.7154	0.2857	0.432	1.539	1.663
Median	0.990	0.069	0.042	3.490	3.981	0.5946	0.2511	0.549	1.374	0.887
Maximum	4.519	10.350	2.530	68.807	35.000	0.0971	1.531	0.745	39.223	36.233
Minimum	0.001	0.583	-0.428	0.116	0.2421	-5.521	0.003	0.019	0.005	0.040
Std. Dev.	0.474	0.678	0.087	4.812	4.7300	0.300	0.1618	0.164	2.369	3.349
Observations	81	81	81	81	81	81	81	81	801	81

Table 1 illustrates the mean, median and standard deviation of the all the variable employed in this analysis. Profitability ratios such as ROE and ROA and Productivity ratio (ATO) had meansof 0.098, 0.052 and 1.132 per cent, respectively. The minimum value ROA is -0.428 in the period of 2017-18. It may be the reason for worst performance of the textile industry in the year 2017-18 and maybe because of the reason of implementation of Goods and Service Tax (GST) by the Indian government in July 2017. The result also shows that mean value of intellectual capital is 4.95. From the Comparison components of intellectual capital, it implies that value added in the industry generated from human capital resources rather than from capital employed and structural capital.

Correlation Analysis

Table 2 shows the outcomes of the correlation matrix of all the variables employed in this study. Table 2 illustrates as anticipated that the VAIC is significantly and positively associated with ATO, ROA and ROE at 1% level significance level. This result supports our argument that IC can be employed to boost the financial performance of the Indian textile industry. Besides, the results in Table 2 also revealed that all three components of IC are positively correlated with ROA, ROE and ATO. Furthermore, the control variables such as MB, which is ratio of market to book value is having significant positive relation with intellectual capital as well as proxies of financial performance at 1 % level of significance, Whereas PC which represents the amount of fixed assets in relation to total asset and DER which represents the leverage of the company shows negative significant relationship intellectual capital at 1 % and 5% level of significance respectively.

	VAIC	HCE	SCE	CEE	ATO	ROA	ROE	MB	PC	DER
Table 2										
CORRELATION ANALYSIS										
VAIC	1.000									
HCE	0.898**	1.000								
SCE	0.422**	0.430**	1.000							
CEE	-.089**	-.193**	094**	1.000						
ATO	0.108*	0.120*	0.111*	0.381*	1.000					
ROA	0.686*	0.431*	0.29*	0.593*	0.042**	1.000				
ROE	0.216*	0.189	0.250*	0.289*	0.016	0.374*	1.000			
MB	0.111*	0.159*	0.064*	0.267*	0.077*	0.239*	0.175*	1.000		
PC	-0.190*	-0.190*	-0.066*	-0.218*	0.047**	-0.221*	-0.171*	-0.215*	1.000	
DER	-0.048**	-0.040	-0.065*	-0.295*	-0.100*	-0.333*	-0.158*	-0.047	0.260*	1.000

Note: * and ** represent 1% and 5% level of significance.

MODEL > INDEPENDENT VARIABLES	MODEL 1 ROA	MODEL 2 ROA	MODEL 3 ATO	MODEL 4 ATO	MODEL 5 ROE	MODEL 6 ROE
Table 3 **OLS REGRESSION ANALYSIS**						
INTERCEPT	0.1394* (0.0571)	0.1314** (0.0448)	1.6779** (0.3730)	1.8041** (0.2943)	-0.0291** (-0.425)	-0.213* (.0433)
VAIC	0.0070** (0.0015)		0.0082 (0.0063)		0.0013* (0.213)	
HCE		0.0635** (0.0424)		1.3627 (0.1740)		0.0171* (0.0211)
SCE		0.0042 (0.0013)		-0.0043 (0.0053)		0.3038 (0.0141)
CEE		0.0324 (0.0347)		0.0981* (0.0598)		0.0539** (0.0521)
DER	-0.0041* (0.0021)	0.0012 (0.0521)	-0.0032* (0.0016)	-0.0021** .(.0230)	-0.0092 (-8.335)	-0.0021 (0.0068)
PC	0.0966 (0.0348)	-0.0943** (0.0307)	-0.1408* (0.1822)	-0.0161** (0.1531)	-0.0960* (-0.233)	0.0691* (0.1922)
MB	-0.442* (0.035)	-0.0123* (0.0712)	-0.299** (0.156)	-0.0851* (.0155)	-0.258* (-0.0921)	-0.1293* (0.0635)
R^2	0.312	0.3761	0.157	.2975	0.133	0.2423
F-stat	36.17*	25.14*	13.33*	1911*	9.67*	4.035*

Notes: ** and * shows 1 per cent and 5 per cent levels of significance respectively; standard errors are shown in the parenthesis. FE shows the fixed-effect model.

OLS regression in Table 3 has been applied to identify the impact of intellectual capital on financial performance. As data are of panel nature, Unit root test. Levin, Lin and Chu unit root test was applied before running the OLS regression for checking the stationary of the data. The Results founds that reject the hypothesis of the unit root. Table 3 shows the result panel data regression of the study. Model 1 is used to assess the hypothesis H1. The results of the regression model 1 show that the efficiency of IC (VAIC) has a significant and positive association with ROA at 5% significance level. Thus, the hypothesis H1 is accepted, and therefore, the results evidence that intellectual capital efficiency has a significantrole in increasing the profitability of the firm. Amongst the control variables, DER and MB has found significant negative relationship with profitability in Indian textile industry. These empirical results support the findings of (Chan, 2009a, 2009b; Ghosh & Mondal, 2009; Ting & Lean, 2009).

Model 2 shows the result of regression, where components of intellectual capital have been taken as independent variables while ROA has been taken as dependent variable. This model used to test the hypotheses H1a, H1b and H1c. The result indicates that that HCE are significantly and positively associated with the profitability (ROA) of the Indian textile firms at 5% significance level, while SCE, CEE shows an inconsequential effect towards ROA. The empirical results of model 2 accept the hypothesis of H1a while rejecting the hypotheses H1b and H1c. Among the control variables, PC and MB has significant negative relation with profitability.

Model 3 endows the result that IC of the Indian textile industry does not have any significant impact on its productivity (ATO). This regression results failed to accept the hypothesis H2. The coefficient shows that 0.0082. This study supports the findings of Chan

(2009a, 2009b), Ghosh & Mondal (2009), Ginesti et al., (2018) who proves an insignificant impact of IC on ATO. Nonetheless, the empirical result of this study contradicts few of the studies like Mondal & Ghosh (2012) and Ramandeep & Narwal (2014) who shows that IC helps in increasing the productivity of the business organization. Among the control variables all the indicators such as PC, MB and DER shows negative significant relationship with asset turnover ratio. Model 4 shows the result of regression, where components of intellectual capital have been taken as independent variables while ROA has been taken as dependent variable. This model used to test the hypotheses H2a, H2b and H2c. The result indicates that capital employed efficiency are significantly and positively associated with Asset turnover ratio (ATO) of the Indian textile firms at 1% significance level, whereas structural capital efficiency and human capital efficiency does not shown any significance effect towards ATO. So this result leads to accept the hypothesis of H2c and rejecting the hypotheses H2a and H2b. The entire control variable such DER, PC and MB has significant negative impact on ATO. This empirical result supports the result of Smriti &Das (2018) who in their paper also confirms that only CEE helps in enhancing the productivity of the firm while HCE and SCE remain inconsequential towards it. Model 5 results founds that IC of the Indian textile industry has significant positive impact on firms return on equity (ROE). This regression results support to accept the hypothesis H2. Hence the result proves that intellectual capital efficiency have significant role in increasing return on equity of the firm. Among the control variables PC and MB have significant negative impact on return o equity of the firm. The three components of VAIC are used in model 6 as a dependent variable of ROE. This model used to test the hypotheses H3a, H3b and H3c. The regression results of this model reveal that HCE and CCE are significantly and positively influencing the Return on equity (ROE) of the Indian textile industry while SCE remain insignificant towards Return on equity. Among the control variables PC and MB have significant negative impact on return o equity of the firm. Hence, the empirical results only support the hypotheses H3a, H3c and reject the hypothesis H3b.

CONCLUSION

Present economy relying on knowledge and components of IC such as human capital, structural capital, and relational capital are treated as strategic assets for an organization. So every organization tends to invest knowledge in a significant proportion of their wealth to develop these strategic assets. These strategic assets are collectively known as intellectual capital (IC). This study aims to identify the effect of IC on the financial performance of the Indian textile industry empirically. The public's VAIC method was applied to a sample of 81 textile companies. The financial performance of the companies is measured through ATO, ROA, and ROE.

The study result reveals that IC efficiency is worthy to enhancing the profitability and return on assets of the textile companies whereas improving the productivity is remains inconsequential. This indicates that those organizations who try to improve their profitability and return on the asset should improve their intellectual capital attention. Among the components of intellectual capital, human capital efficiency (HCE) employed efficiency (CEE) is found to be the most significant component accelerating the financial performance of the textile industry in India. These indicate that Indian Textile industries are using traditional physical capital as well as human capital as their major contributor to financial performance. So the firm can retain their human capital efficiency by giving proper training and development of their employees and treat expenses of employees as an investment instead of cost.

The empirical study also states that the structural capital of the Indian textile firms is insignificant. It may reason for less attention of structural capital given by the company or may be the reason of textile industry is labor-intensive, therefore the motivation to use of SC like patent, copyright, the trademark is irrelevant in the textile industries. Earlier studies result found that all the three intellectual capital components having not to impact on the financial performance also investors do not consider intellectual capital in their investment decision and they consider other factors which may more influence than intellectual capital performance. These factors may be the expectations of the prices in the future and stakeholders' market sentiments.

Limitations

There has been some limitation to this study that, in the last fifteen years, there have several changes in accounting practices in India and it may affect the results of the different companies. The study uses only 81 leading textile companies, based on market capitalization. The value- added intellectual coefficient (VAIC) is employed in this study to measure the IC performance oftextile companies. So, the limitation of this method also reflects this study.

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