AN EXECUTIVE SUMMARY OF

THESIS ENTITLED

IMPACT OF INTELLECTUAL CAPITAL ON FINANCIAL PERFORMANCE OF SELECT LISTED INDIAN COMPANIES

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1. SUMMARY

1.1 INTRODUCTION

In the 21st century, the transition from a production-based economy to a knowledge-based economy has elevated specialized knowledge, referred to as 'human capital,' to a critical component for organizations seeking competitive advantage. Recognized as the fifth factor of production, human capital encompasses the skills, knowledge, and experience of employees. Intellectual capital, a broader construct, includes intangible assets such as human capital, structural capital, and relational capital, serving as a vital resource for enhancing organizational efficiency and value.

Significant research has been conducted to conceptualize, classify, and measure intellectual capital, with much of the focus directed toward assessing its impact on the financial performance of companies. Practitioners and researchers are continually striving to develop improved models and methodologies for the recognition, measurement, and management of intellectual capital, aiming for its disclosure in annual reports. However, challenges persist in implementing these frameworks within financial statements. This research seeks to bridge this gap by proposing a newly developed model for measuring intellectual capital that is applicable to both manufacturing and service sector organizations.

The main objective of this research endeavour is to evaluate the impact of Intellectual Capital on financial performance of select listed Indian companies. To evaluate the impact firstly researcher has examined the disclosure practices followed by Nifty 50 companies considering the terms ‘Intellectual Capital’, ‘Human Capital’, ‘Structural Capital’ and ‘Customer Capital’ and the components under Human Capital, Structural Capital and Customer Capital. researcher has also collected the opinion which help the researcher to frame new model for measurement of Intellectual Capital. Lastly researcher evaluate the impact of newly developed model Intellectual Capital Value (ICValue) and widely accepted model Value Added Intellectual Co-efficient (VAICTM) on the financial performance of the companies.

This research work has been divided into three parts:

Part One of the study evaluates the disclosure practices undertaken by Nifty 50 companies for the year 2020-21 and examines the detailed content disclosure for the items under different components of Intellectual Capital.

Part Two of the study deals with Quantitative analysis (Survey Study). This part focuses on collecting and analysing the opinion received from the respondents through a survey method. Views of professionals like CA, CMA, CS, CFA etc., and representatives from various other professional backgrounds and academicians are included in the research.

Part Three of this research endeavour incorporates case study to compare the effectiveness of widely accepted model VAIC and newly developed model ICValue on financial performance. Comparison will support the researcher to bring validity and objectivity of ICValue model as a tool to measure Intellectual Capital and to disclose it in annual reports. This model is applicable to both the sectors- Manufacturing sector and Service sector.

1.2 Research Methodology

This part of the study discusses the research methodology adopted and a road map to achieve determined research objectives spelling out research design used, methods of research, research instruments, population size, sample size, sampling method, sample unit, data source and data analysis tools. Content analysis, survey method and case study method have been used to conduct this research as highlighted in three sections below. The same has been discussed in detail in chapter 3 and chapter 4 respectively.

Detailed Content Analysis

This part of the study discusses the detailed content analysis carried out to understand the practices followed by the listed Indian companies with the objective of documenting the practices followed for measuring Intellectual Capital of selected Indian corporates which disclose intellectual capital. A two phased content analysis was carried, first of companies disclosing intellectual capital in annual reports for the year 2020-21 and in the second, analysis of the companies disclosing different components, their respective items and their dimensions under Intellectual capital focussing on disclosure practices for the period of five years from 2016-17 to 2020-21. On the basis of the results of content analysis survey for awareness of Intellectual Capital has been carried with the help of Questionnaire.

Survey Study

The opinions of the Chartered Accountants, Cost Accountants, Researchers, Financial Analysts and Academicians on intellectual capital were collected by applying survey study techniques.

A questionnaire was developed as a research instrument. The instrument has three segments, first focusses on awareness of the term Intellectual capital, the second segment deals with methods of measuring Intellectual Capital, and the third segment focusses on the importance given to different variables to measure the value of Intellectual Capital. A random selection of respondents was undertaken in this quantitative analysis. The non-probability sampling approach is put to use based on purposive sampling method. Representatives from various industries and academicians of different city of India are included in the research.

Primary data has been collected using Structured Questionnaire as a research instrument using a Likert Scale with equal intervals between response categories, to collect opinion on close ended questions. The questionnaire is canvassed to 340 people willingly consented to participate in the research fetching responses out of which 170 have constructively responded.

The questionnaire in the study contained 4 parts, 17 questions with sub questions make total 58 questions. Part – I elicit the Personal Profile (demographic details) of the respondents, Part – II elicits their level of knowledge and understanding about intellectual capital, intangible assets and different terms under Intellectual capital. Part – III elicits the awareness of respondents about the various method of measuring intellectual capital and their perception about considering the basis for measuring the value of intellectual capital and disclosing this capital in annual reports. Part – IV elicits the perceptions of respondents regarding the importance to be given to various components of Intellectual capital for considering it in valuation of Intellectual Capital.

The questionnaires completed in all respects were only considered for the analysis. The raw data collected was further converted into numerical data, coded, and fed into a computer for analysis and storage. The data collected was coded and subjected to statistical analysis. The statistical analysis of the variable in the study has been performed using the following tests:

- Descriptive Statistics,
- Cronbach Alpha
- Factorial Analysis and
- Pearson's Chi-square

Case Study Analysis:

The third part of the research endeavor deals with in-dept case study analysis of selected companies from the manufacturing and service sector in order to verify the cause-and-effect relationship of already developed model and new model of measuring Intellectual capital with financial performance of the companies. This part of the study incorporates case study to investigate the validity, objectivity and efficiency of Intellectual Capital model to ascertain its relationship with financial performance of the companies.

The main purpose of this research is to explore Value of Intellectual Capital and its impact on the financial performance of listed companies in India. This study collects data from the annual reports of listed companies on National Stock Exchange (NSE).

The fourth chapter includes the calculation of the value of Intellectual Capital by two different methods and calculation of four different financial performance indicators for the selected 4 companies for the period of 10 years to measure the impact of Intellectual Capital with the financial performance indicators of the sample companies. This case study method contributes to:

- develop a framework for measuring Intellectual capital and its productivity.
- ensure the objectivity of Intellectual Capital.
- gauge the relationship of Intellectual capital with the financial performance as well as return on investment of selected companies.
- evolving a commonly accepted, useful Intellectual Capital Value Model.

For the case study method all the companies registered and listed in National Stock Exchange of India are the sampling elements for the work.

The non-probability sampling approach is used and based on purposive sampling method sampling units are drawn from the population of Nifty 50 Companies.

The selection criteria case study are, Economic Value Added is disclosed in the Annual Reports from 2010 to 2020 and the companies are listed in Nifty 50 in these 10 years will be considered for sample selection so that the impact of the value of Intellectual Capital and its effect on financial performance can be measured for the companies representing different market Capitalisation and different sectors. Required data has been extracted and applying statistical tool to analyse the data and will arrive at conclusion.

The methodology adopted is based on an analytic-descriptive study, from annual reports and financial statement of selected sampling companies.

The aim of the study is to measure the value of Intellectual capital in listed companies in India, as well as their impact on financial performance of the companies for the period 2012-13 to 2021-22. The sample size of the study consists of the 4 companies from diversified sectors, listed on the BSE and the NSE.

The value of Intellectual capital has been measured based on Value Added Intellectual Capital (VAIC^{TM}) model and with the new proposed model named Intellectual Capital Value (ICValue) model. This value is identified as independent variable representing the Intellectual Capital of the companies.

Market Capitalisation, Gross Value Added, Economic Value Added and Net Value Added are identified as indicators of financial performance of the companies and to gauge the relationship these variables are calculated for the period from 2012-13 to 2021-22 for the selected 4 companies. The calculated Market Capitalisation, Gross Value Added, Economic Value Added and Net Value Added are identified as 'dependent variable' representing the financial performance of the sample companies.

For the empirical examination Linear regression equations are developed for each hypothesis and applied on this data set to derive meaningful outcomes.

The case study analysis has been carried out to establish the relationship of Intellectual Capital Value with the variables listed above and the value is to be measured by considering the variables listed below. The case study analysis has been carried out using the following basic statistical techniques:

I. Growth Analysis

II. Descriptive Statistics

III. Multiple Data Analysis

a. Simple Correlation

b. Multiple and Simple Regression Analysis

To investigate the validity, objectivity and efficiency of the Intellectual capital measurement methods, the study is carried out by analysing the behaviours of all the important variables indicating the efficiency and profitability for the valuation of Intellectual Capital.

These variables are,

i. Employee benefit expenses

ii. Management remuneration

iii. Net operating profit after taxes

iv. Risk free interest

v. Market Risk

vi. Weighted Average Cost of Capital

vii. Total Assets

viii. Market Price Per Share

ix. Other Income

x. Market Capitalisation

xi. Human Capital

xii. Structural Capital

xiii. Capital Employed

xiv. Gross value Addition

xv. Net Value Addition

xvi. Firm Size

xvii. Intellectual Capital Value

xviii. Economic Value Added

1.3 Key Findings

1.3.1 Detailed Content Analysis

The result of content analysis presented below with major findings:

i. From Nifty 50 companies in the year 2020-21, following companies Adani Ports, IOC, Tata Steel, Wipro Ltd, Titan, ICICI bank, Tech Mahindra, Ultra Tech Cement, Hero Motor, UPL and L&T are the companies who have disclosed Intellectual Capital in the form of specific amount spent on Research and Development expenses, Patents filled, designed registered and the new products developed.

ii. Other companies like SBI Life Insurance, Hindalco, Reliance, HDFC Bank, Eicher Motors and Maruti Ltd, have disclosed the information under three subheadings like under Input, Output and Outcomes. Under Input they have mentioned the investment done under Research and

Development, considered as resources for the business, patents filled, number of employees under Research and Development and number of centers under R&D. Under output they have disclosed new products launched and patent granted, the result of R&D expenditure. Lastly, they have mentioned the outcomes disclosing the business revenue increased due to the new product launched.

iii. The rest of the companies have disclosed the same information but under only two headings, input and output.

iv. It has been summarised that corporate houses have been unable to assign numbers to Intellectual capital. They have presented intellectual capital in the form of input and output in relation to research and development expenses. All Corporate houses have failed to recognize the value of intellectual capital in their annual reports.

v. It has been suggested that corporate entities have provided information with respect to expenses incurred on innovation initiatives and the patents filed and granted. However, intellectual capital encompasses more than just research and development (R&D) and patents; it also encompassed customers satisfactions, management philosophy, and human competence in relation to relational capital, structural capital and human capital respectively. There has been a need to investigate the extent to which companies disclose information pertaining to these three classifications.

1. The second section of the chapter has dealt with disclosure analysis of different classifications of intellectual capital and its components. The findings of this disclosure analysis is as follows:

   i. The individual item analysis under Internal Capital has shown that 'Processes' is an item which has been disclosed by all the companies selected under study with 48 companies disclosing it for all five years of the study. Management Philosophy, an important item of disclosure for intellectual capital, has not been disclosed for all five years by any company, only 9 companies have tried to disclose it for less than five years of study. Similar result has been for Copyright, an intangible asset. For Copyright, the similar analysis has not been applicable as it will be disclosed by the company, when they go for copyright. Hence the analysis has shown that 33 companies in five years of study have not applied for copyright and none of the companies has disclosed it for all five years. Patents and innovations have shown similar disclosure practices, as based on innovations, companies can go for filling the patent. So, a sizable number of

companies have gone for innovations and have reported the patent/s of the companies for all five years.

ii. External Capital, has been referred to as Relational Capital or Customer Capital, pertaining to the resources that facilitate interactions with external entities. Among the sample companies, all components of customer capital have been disclosed for different number of years, indicating awareness and consistent disclosure practices for customer capital items. Notably, customer-related aspects have received significant emphasis due to their pivotal role. Although customer details have been consistently disclosed but often omitting their satisfaction level. Only Indian Oil Corporation (IOC) has disclosed customer satisfaction in 2020-21, underscoring its growing recognition. Similarly, 'Loyalty' has been considered as another crucial external capital, gathered considerable attention, evidencing widespread disclosure practices in annual reports.

iii. The analysis of human capital has encompassed ten disclosure elements pertaining to human capital. Notably, despite the intrinsic significance of employee expertise within human capital, it has remained universally unaddressed in corporate disclosures. Conversely, education and training has manifested appreciable prominence in disclosure practices, except for Divis Laboratory and Sun Pharma, the former has not disclosed either item once in five years, or the latter has omitted training disclosure for a single year. Conversely, other entities consistently have disclosed these elements over the five-year study period. The significance of safety as a disclosure item has been underscored by user interest, gauging employee welfare measures, resulting in widespread disclosure practices over the observed period.

iv. None of the companies of the sample, disclose all the items of intellectual capital disclosure index in their annual reports for all five years. This has shown the unawareness about the concept and the items of intellectual capital among corporate houses. Even none of the corporate houses have assigned numbers to intellectual capital in their annual reports.

v. This has provided a roadmap to collect the opinion of the experts and academicians in relation to the awareness of this term as intangible assets and the factors to be given importance in measuring the value of Intellectual Capital.

1.3.2 Survey Analysis – Quantitative Analysis

This part of section deals with collecting opinion from experts and academicians about awareness of the term intellectual capital, the measuring methods and the opinions about the importance given to variables for measuring Intellectual Capital. The result of the empirical analysis has provided information about the awareness of term and methods of Intellectual capital in India.

The major findings of the study are explained below:

i. First part of the findings shows Demographic Profile of the Respondents:

   a) The most frequent place of residence has accounted for 132 individuals, constituting approximately 79.04% of the total sample residing in Vadodara. A relatively moderate at Bangalore and Hyderabad, low frequency residing in Anand and the lowest frequency is at Bharuch, Jaipur, Tamilnadu, Kariyapatti, Mehdipatnam and Pune contributing 0.6% of the total sample. Overall, most individuals in the sample have been residing in Vadodara, followed by Bangalore, while other locations exhibit lower frequencies.

   b) A predominant proportion of respondents have accounted for 49.41% of the total respondents possessing postgraduate qualifications in Commerce and Management, while a notable subset comprising 18.24% have attained Ph.D. credentials within the same disciplinary domain. The blend of respondent's qualifications has explained a majority of individuals with a background in commerce, suggesting their potential utility in discussions pertaining to the awareness and methodologies associated with Intellectual Capital.

   c) Among the 170 respondents surveyed, it has been observed that 14 individuals possessed dual professional qualifications, such as CA paired with CWA or CS coupled with CFA, resulting in a total of 184 responses. Excluding "others" category, the predominant professional qualification among respondents was Chartered Accountancy (CA), comprising 19.02% of the total, followed by Cost and Works Accountancy (CWA), Certified Financial Analyst (CFA), and Company Secretary (CS). Notably, several respondents have held dual professional designations, such as CA and CWA, CWA and LLB, and CS and CFA. The prevalence of Chartered Accountant professionals within the respondent regiment underscores their potential to provide valuable insights, thereby enhancing the depth of our survey for subsequent analyses.

d) The tabulated data has indicated 48.22% of the respondents have been affiliated with the service sector, with a notable concentration in the domains of accounting and finance, while the remaining portion has been pertained to financial analysts. This reflects the relevance and importance of their views as they have been professionals working in the related fields and enriching the responses and outcome of the survey. Additionally, among the self-employed category, 15.29% have been self-employed professionals, with a subset belonging to unspecified occupational categories not delineated in the questionnaire. Consequently, the predominant representation of respondents from the accounting and finance sector has underscored the significance of their perspectives in augmenting the depth and breadth of our survey, thereby enriching its analytical scope.

e) Professional designation of accounting professors has been comprised of 43.55% of the total. Additionally, 22.94% of respondents have identified themselves as investors, with a smaller contingent of 2.35% being brokers and 5.29% as financial analysts. Moreover, a subset of 4.11% has indicated active engagement in accounting practice. This distribution has suggested the potential value inherent in their insights pertaining to valuation variables, thereby offering valuable inputs for the development of novel methodological frameworks.

f) A notable portion of respondents constituting 32.94%, possess professional experience spanning less than five years, while a majority has been comprised of 45.3% or 77 individuals accruing experience below the decade mark. Furthermore, 21.76% of respondents, totalling 37 individuals, boast experience has exceeded ten years. This diversity in professional tenure among respondents have shown potential significance in elucidating insights into the levels of awareness and the perceived necessity surrounding the disclosure of Intellectual Capital within financial statements.

ii. The next part of the findings has shown the result of inferential statistics including reliability test, Chi Square and Factor Analysis, carried out on the responses received from respondents.

a) The reliability tests, Cronbach alpha coefficient determined the attributes / opinions have been strongly related to each other and to the composite score. All dimensions of the questionnaire related with measuring opinion have been tested and the Cronbach alpha ranged from 0.68722 to 0.97158 has shown internal reliability of the scale. Testing the scale for reliability has revealed that for all the above statements Cronbach alpha coefficient has

been of 0.9715. Therefore, this scale has been considered reliable, and it has been capable enough for further data processing.

b) Convergent validity has been measured by comparing mean scores of scales with other measures of the same construct. It has demonstrated, on average, respondents have placed the highest importance on Human Capital, followed by Relational Capital and Structural Capital.

c) Apart for the above-mentioned findings, Factor Analysis has been conducted. Factor analysis has attempted to identify underlying variables or factors that has explained the pattern of correlations within a set of observed variables. Factor analysis has been often used in data reduction to identify a small number of factors explaining most of the variance, observed in a much larger manifest variable. Factor analysis has also been used to generate hypothesis regarding casual mechanisms or to screen variables for subsequent analysis.

d) Factor 1, most dominant, explaining a substantial portion of the variance at 64.264%. These variables collectively represent aspects related to Managers help employees in solving official problems, is supportive to innovations, understand all factors of employee satisfaction, engage more ideas in industry, including Employee skills are upgraded, are motivated to share new and innovative ideas, Employees are highly educated have been the factors of human capital relating to employees and management have been included in the first component, compelling employee cost and management remuneration and fees should be considered as a variable in quantifying the intellectual capital.

e) Factor 2 accounts for 8.602% of the variance and has included variables such as Research and Development invested in product design, Systems allow easy information access, Procedures support innovation, Customers are loyal, Increase revenue per employee, and implement new ideas have been the factors appearing to capture aspects related to Research and development of the organisation.

f) Factor 3 explains 4.451% of the variance and is characterized by variables such as Atmosphere is supportive, Firm is bureaucratic nightmare, Support development of ideas, Procedures support innovations, and Longevity of relationships are the factors have been related to the administrative capital compelling organisational capital of the firm.

g) Factor 4, with a variance of 3.867%, includes variables like Use what customers want to make money, Launch products that consumers do not desire, and don't care what customers want are the factors have been related to the customer capital of the firm.

h) On the basis of Factor Analysis, it has been summarized that all the variables relating to structural capital, research and development, customer capital and relational capital have been the capital created by employees and management's knowledge, skill, experience and intellect. Hereafter, variables relating to human cost including employee expenses and management remuneration have been considered in methods of quantifying intellectual capital.

i) Various Chi-squares have been conducted to check the influence of one factor over the other. The analysis has revealed that there is a significant influence of highest qualification i.e. Graduate / Post Graduate / Ph.D. in Commerce and management or others, Professional Qualifications CA/CWA/CS/CFA/CMA/LLB and others; Business Professions i.e. Self-employed professionals / Businessman / Industrialist or service in Accounting and Finance or Finance Analyst or Others and Professional Profile i.e. Industrialist / Brokers / Investors / Financial Analysts / Managers / Researchers / Professor in Accounting / Practicing in Accounting / Mutual Fund Advisor etc., on awareness of Intangible Assets. It has been found that there has been a significant influence of all the above variables on awareness of Intangible Assets. Apart from that, work experience has no significant influence on awareness of Intangible Assets.

j) There has been no significant influence of business professions on the awareness of different methods of measuring Intellectual Capital, while business profession has significant influence on disclosure of intellectual capital in financial statements and developing new methods for measuring Intellectual Capital.

k) There has been a significant influence of professional profile on developing new methods for measuring Intellectual Capital.

It has been recommended that intellectual capital should be measured and should be disclosed in the annual reports in financial statements as the business profession does have a significant influence on disclosing this variable in financial statements. This has been considered due to the significant knowledge business profession possessed about the term intangible assets. The variables have been considered are employee benefit cost and

manager's attitude compared to other variables due to more importance as its mean score has been high compared to other variables.

1.3.3 Case study Analysis

This part of the study presented an empirical study to measure the value of Intellectual Capital by Value Added Intellectual Coefficient(VAIC^{TM}) and Intellectual Capital Value(ICValue), and has analysed the relationship of Intellectual Capital with financial performance indicators- Economic Value Added, Gross Value Added, Market Capitalisation and Net Value Added of the companies, as the main objective has been to examine the impact of Intellectual Capital on financial performance of listed Indian Companies.

1. The study has been conducted by selecting companies from the manufacturing and service sectors based on their disclosure of Economic Value Added(EVA) in their annual reports in the duration of 2007-08 to 2021-22.
2. The chapter has been structured into three sections. The first section examined the impact of intellectual capital on financial performance, utilizing the Value-Added Intellectual Coefficient (VAIC^{TM}) model. The second section has focused on developing a model and has assessed its effectiveness by determining its relationship with financial performance. The model's formulation has been based on key variables identified through a literature review, as well as insights from professionals and researchers obtained via a scientifically designed structured questionnaire. The third section has compared the results of the relationship between the VAIC^{TM} model and financial performance with those of the newly proposed model, evaluating its impact on financial performance.
3. Intellectual Capital and its components have been measured for all sample companies considering the model VAIC^{TM} . Dependent variables considered for the study have been calculated and the relationship of components and VAIC^{TM} have been analysed with each dependent variable with the help of Pearson's Correlation and simple regression.
4. The hypothesis testing and the estimation of regression equation analysis have shown the following results:
5. **H1:** Intellectual Capital(VAIC^{TM}) of a firm is positively related to its financial performance (Economic Value Added (EVA)).
    a. The results for manufacturing companies have shown that there is a positive and statistically significant relationship between VAIC^{TM} with EVA. This has shown that

there is a significant and positive impact of Intellectual Capital (VAIC™) on Economic Value Added (EVA). While for service companies the data does not support the hypothesis and has failed to establish a positive and significant relationship with VAIC™ with EVA.

6. **H2:** Intellectual Capital (VAIC™) of a firm is positively related to its financial performance (Gross Value Added (GVA)).
    a. The results for manufacturing companies have shown that there has been a positive and statistically significant relationship of VAIC™ with Gross Value Added (GVA). This has shown that data supported the hypothesis and hence, it can be said that there has been a significant and positive impact of Intellectual Capital (VAIC™) on Gross Value Added (GVA). While for service companies, data has not supported H2 rejecting the hypothesis and accepting that there has been no positive significant impact of Intellectual Capital (VAIC™) on Gross Value Added (GVA) for service companies.
7. **H3:** Intellectual Capital (VAIC™) of a firm is positively related to its financial performance (Market Capitalisation (MCap)).
    a. The results for manufacturing companies have shown that there has been a significant relationship of components of VAIC™ with Market Capitalisation, while VAIC™ has no statistically significant relationship with market Capitalisation. This has shown that data does not support H3 and hence it can be said that there has been no positive and significant impact of Intellectual Capital(VAIC™) on Market Capitalisation(MCap) for all the companies under study.
8. **H4**: Intellectual Capital(VAIC™) of a firm is positively related to its financial performance (Net Value Added(NVA)).
    a. The results for manufacturing companies have shown that there has been a significant relationship of components of VAIC™ with Net Value Added, while VAIC™ have a significant relationship with Net Value Added only for ACC Ltd and not with HUL Ltd in manufacturing sector, while for service companies, capital employed efficiency have a significant impact on NVA while VAIC™ and Intellectual Capital Efficiency (ICE) have no significant impact on NVA. This has shown that data doesn't support H4 and hence it can be said that there is no positive and significant impact of Intellectual

Capital (VAIC^{TM}) on NVA for all the companies selected as samples under study except ACC Ltd.

9. The findings of VAIC^{TM} with financial performance has shown the mixed results where service sector companies have no significant impact of Intellectual capital (VAIC^{TM}) on financial performance. The mixed results have given the base to develop such a model that can measure the value of Intellectual Capital and can have a significant impact on the financial performance of the companies. Researcher has tried to develop a model named Intellectual Capital Value (ICValue) by capitalising the average employee cost and managerial remunerations with the weighted average cost of capital.
10. The second section of chapter Four has calculated ICValue for all sample companies under both the sectors and has analysed ICValue relationship with financial performance indicators considering regression analysis statistical tools.
11. H5: Intellectual Capital (ICValue) of a firm is positively related to its financial performance Economic Value Added(EVA).
    a. ICValue has been a highly significant predictor of EVA in service companies and partly in manufacturing companies namely HUL ltd and also with both the companies of service sector, as the relationship has been 80% with all the three companies, while there is no significant positive relationship of ICValue with EVA in ACC LTd as relationship is below 10% . This has shown that data supports H5 and can be said that firm has been positively and significantly related to Economic Value Added(EVA) except ACC Ltd.
12. **H6:** Intellectual Capital(ICValue) of a firm is positively related to its financial performance Gross Value Added(GVA).
    a. ICValue has been a highly significant predictor of GVA in service companies and partly in manufacturing companies namely HUL ltd while there is no significant relationship of ICValue with GVA in ACC Ltd. ICValue is having significant positive relationship with GVA for both the service sector companies. Hence the data support H6, and has concluded that there has been a significant positive impact of Intellectual Capital(ICValue) on Gross Value Addition(GVA) except ACC Ltd.,
13. **H7:** Intellectual Capital(ICValue) of a firm is positively related to its financial performance (Market Capitalisation (MCap)).

a. For ACC Ltd, there has been a strong positive and statistically significant relationship between Market Capitalisation and ICValue, suggesting that as ICValue increases, Market Capitalisation also increases significantly.

b. For all sample companies namely ACC Ltd, HUL Ltd, Infosys Ltd, and TCS Ltd, there has been a strong, positive and statistically significant relationship between Intellectual Capital(ICValue) and market capitalisation, indicating that data supports H7.

14. **H8:** Intellectual Capital(ICValue) of a firm is positively related to its financial performance (Net Value Addition (NVA)).

    a. ICValue is a highly significant predictor of Net Value Addition for all the sample companies under study. For all sample companies namely ACC Ltd, HUL Ltd, Infosys Ltd, and TCS Ltd, data has shown the strong, positive and statistically significant relationship between Intellectual Capital and Net Value Added, indicating that data supports H8.

15. The third section compares the results of the relationship between the VAIC^{TM} model and financial performance with those of the ICValue model and financial performance, by evaluating its impact on financial performance. To test the efficiency of the new model, the result of this model will be compared with the VAIC^{TM} model, the corresponding hypothesis has been proposed:

16. **H9:** In comparison to VAIC^{TM} model, ICValue model is a better predictor of relationship between Intellectual Capital and Economic Value Added(EVA).

    a. The models have been highly significant across all companies, with VAIC^{TM} having a notable positive influence in ACC and HUL, while ICValue has been a strong predictor of EVA for Infosys and TCS, for Infosys Ltd and TCS Ltd hypothesis has been accepted. For manufacturing companies hypothesis has been rejected, for EVA it can be said that ICValue has not been a better predictor of relationship between Intellectual Capital and Economic Value Added(EVA), while VAICTM is a better predictor of relationship between Intellectual Capital and Economic Value Added(EVA),

17. **H10:** In comparison to VAIC^{TM} model, ICValue model is a better predictor of relationship between Intellectual Capital and Gross Value Added(GVA).

    a. For all the sample companies from both the sector, ICValue model has been a better predictor of relationship between Intellectual Capital and Gross Value Added(GVA) as

strong relationship can be seen in HUL Ltd., Infosys Ltd and TCS Ltd, hence the hypothesis has been accepted.

18. **H11:** In comparison to VAIC™ model, ICValue model is a better predictor of relationship between Intellectual Capital and Market Capitalisation(MCap).
    a. For all the sample companies from both the sector, ICValue model has been a better predictor of relationship between Intellectual Capital and Market Capitalisation(MCap) as strong relationship can be seen, hence the hypothesis has been accepted.
19. **H12:** In comparison to VAIC™ model, ICValue model is a better predictor of relationship between Intellectual Capital and Net Value Added(NVA).
    a. For all the sample companies from both the sector, ICValue model has been a better predictor of relationship between Intellectual Capital and Net Value Added(GVA) as strong relationship can be seen in HUL Ltd., Infosys Ltd and TCS Ltd, hence the hypothesis has been accepted.
20. **Major Findings:**
    i. ICValue has been having a positive influence on EVA for all sample companies.
    ii. ICValue has been having significant impact on EVA for service companies.
    iii. ICValue has been having a positive influence on GVA for all sample companies.
    iv. ICValue has been having a significant impact on GVA for service companies and HUL Ltd.
    v. ICValue has been having a strong positive influence on Market Capitalisation for all sample companies.
    vi. ICValue has been having a strong positive influence on Net Value Added for all sample companies.
21. To conclude, ICValue has been a better predictor for financial performance compared to VAIC™.
22. Clubbing both the model, researcher has established a strong relationship between Intellectual Capital and Financial Performance indicators of all companies. It can be concluded that by employing new model and clubbing it with the efficiency model, company has been able to create a strong relationship with performance variables based on financial statements and market capitalisation for both the sectors.

    Finally, the new model should be adopted by the companies in order to bring more transparency in disclosure practices and to assist the stakeholders in their decisions.

2. CONCLUSION

Traditional accounting measures of financial performance have long served as the primary tool for evaluating businesses by organizations and investors. However, this study challenges the narrow focus on financial performance as the sole criterion for business assessment due to the wide gap between market value and book value of the organisation. It demonstrates that, in addition to tangible resources, numerous intangible factors significantly influence corporate performance, some are recorded while some are not due to the problem of its measurement. The intangible that has not been measured is Intellectual Capital. Today Intellectual Capital is the main source of value creation however, traditional accounting model has failed to measure this important source of value creation. It has become a critical driver of competitive advantage in contemporary markets, showing the urgent need to integrate intellectual capital (IC) measurement into conventional accounting practices. Research of this nature can aid policymakers and managers in effectively measuring and leveraging intellectual capital to enhance business profitability.

As with the change of the organisation from tangibles to intangibles, it is observed that with service sector, manufacturing sectors also are dependent on intellect for the competitive advantage. The need to address this capital is increasing with increase in the use of technology. Stakeholders and managers should also be aware about this capital. The solution to this is an Intellectual Capital value which provides insight into its rational measurement which is the need of the technological era. This study presents a new model to measure Intellectual Capital – ICValue.

Literature review, the disclosure practice analysis, empirical analysis of opinions and the case study analysis have confirmed that the objectives with which this study was undertaken have been effectively achieved. Given that other specifically designed Intellectual capital measurement models carrying limitations, an alternative measure of intellectual capital, a model which is free from defects is presented in this study. ICValue is based on publicly available data from financial statements and can be used for public and private companies. It is crystallised from the case study analysis that measuring Intellectual capital by ICValue method has proved to be conducive for implementation being simple and easy to calculate and inexpensive to incorporate. Thus, its advantage is that at moderate expense of accuracy, it allows measurement of Intellectual Capital for different companies in the same industry and across industries. The case study result of this research contributes to the development of intellectual capital measurement theory and could have several practical implications. It can be applied by management as a tool to better manage the firms

for value creation and can be used as an indicator for selecting investment objectives. The value of intellectual capital can also be incorporated in the annual reports. This can be used by the users of annual reports for effective decision making. ICValue as a financial tool, is a remedy for accurate value from the financial statements without biasness. ICValue hence, is a better measurement model for Intellectual Capital to improve applicability, sustainability and development.

3. RECOMMENDATION

In the light of the above findings, the researchers would like to propose the following recommendations:

To Management

- In this knowledge intensive economy, managers of any sector should pay attention to enhance and enrich human skills through customised training and development programmes. Familiarize employees with global practices and train them on a regular basis to update their own skills and knowledge with the prevailing required skills for the organisation.
- As seen from the results during recession, the employee capital are less affected resources. Hence, this capital should be taken care of by providing satisfactory environment to employees, safeguarding their workforce, giving suitable remuneration and providing scope for self-actualisation.
- The result also shows the combine effect of human capital and capital employed. Even in the service sector, capital employed plays a significant role in financial performance of service sector companies. Hence manager should try to develop and sustain Intellectual capital along with physical capital.
- Since the results also shows that over the years Intellectual Capital has kept on increasing, the management should focus on the long-term goals rather than short term goal and quick windfall of company.
- The result of manufacturing sector is in contrary to service sector for efficiency ratio. Hence, in this sector manager should try to develop and sustain physical capital along with Intellectual Capital.

To Customers

- One of the components of Intellectual Capital is Customer capital. Customer should be alert, they should make aware the organisation through effective feedback of the product, then only they will be in true sense ‘the king’ for the organisation.

To Investors

- The study shows that Intellectual capital has a significant impact on market captialisation of all the companies of service as well as manufacturing sector selected as a sample for study. This phenomenon makes it clear that this value has an impact on investors for taking decisions for the firm. They should be aware about such hidden capital and such awareness can be brought when the value is disclosed in the annual reports as a voluntary disclosure.

To Accounting Institutions and Professional Bodies

- Since the existing accounting methods are made considering physical and tangible assets for manufacturing sector, they failed to give justice to knowledge-based industries. Accounting bodies, such as ICAI and ICMAI should evolve into this developed model.
- Gloablisation has brought about transformative changes in the conduct of business across nations. There is an increased necessity to align India's accounting system with global standards. Particularly, in the field of intellectual capital, measurement and reporting should be incorporated in the accounting practices as Skandia Navigator model is already adopted in Scandanavian countries.

To Practitioners and Academicians

- Practitioners and academicians should make conscious and concentrated efforts to work together and make the above mentioned recommendations to become reality and bridge the gap between academia and industry.

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