Influence of Knowledge on Intellectual Capital, Benefits and Challenges to be Faced at the Time of Managing Intellectual Capital - A Study W.R.T. Bengaluru

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Abstract

Across the globe it is felt very much how knowledge influences intellectual capital. Converting knowledge or intellectual capital into long term business value is a more difficult process than in theory. 21st century is described by developing the importance of knowledge and its effects on all aspects of an organisation (Bose 2004). Today knowledge is the key source of economy and the only source of competitive advantage (Druuer, Peter F. 1995). In the past economies relied on use of land, natural resources, equipment and capital for the creation of value, but of late in this information economy economies will rely on application of knowledge. Empirical study is conducted on respondents belonging to 10 each software and pharma companies at Bengaluru. The result shows clearly that knowledge is a powerful driver of intellectual capital and value creation and the knowledge of challenges to be faced by the managers at the time of managing intellectual capital and which serves as indicates of influencing IC. The present research also highlights about how knowledge will educate and create an awareness in managers for nurturing organisational IC. Knowledge as a powerful strategy is value capable of devising better strategies, processes and methods to manage IC.

KEYWORDS: Intellectual capital, performance value, strategy management, Driver, information economy.

Introduction

Researchers is of the opinion that traditional organisational management is not considerable as a the most appropriate strategy and organiation has to think on alternative means of competing in the market. With the globalised scenarios impact and changing socio economic dramatic changes in demographics the organisations of late started concentrating on investing in the areas of employee training, customers relations R&D and computer systems (OECD 2008). Intellectual capital has been preferred over traditional physicial and financial capitals as a basis for competition. This view has emerged since IC is being recognised as the foundation for sucess in today's knowledge economy (Zhou, 2003).

Though the idea of IC has been avoided for many years (Sarabathi et al. 2010), the researchers and experts have insisted on mesuring and managing IC. This is done to the fact that IC in a significant way influences economic growth, value creation, competitiveness, business performance (Kateb et al. 2014; KonnenicBetal. (2012). In addition to IC another resource for an organisation is knowledge and it is like blood that

flows in the viens and a significant driver of survival of organiations in todays globalised scenario.

In addition to knowledge creation, knowledge sharing and application of knowledge is also most important. Knowledge sharing practices drives the efficiency or performance. Improvidng the organisational performance is not only solely impacted by tangible resources but also intangible resources.

Objectives of the study

1) To study the demographic profile of respondents.
2) To analyse the influence of knowledge on intellectual capital.
3) To analyse the benefits of efficient management of intellectual capital and
4) To analyse the challenges to be faced by the managers in managing IC.

Hypotheses

1) To demographic profile of the respondents is not supporting IC, firms performance and value creation.
2) Knowledge is not influencing IC.
3) There are no benefits of efficient management of IC.
4) There are no challenges to be faced by the managers at the time of managing IC.

Research methodology

Data Collection : The study considers both primary and secondary data. The primary data collected by administering questionnaire as schedule, considering the avoid of nonresponse, time saving and covering the area. Secondary sources include research journals, different websites and previous research studies. The collected data is presented in the form of tables and quantitative metrics were performed in order to testthe data scientifically.

Research Sample

Bill Golden formula for the selection of number of respondents is followed.

SS = infinite where population is > 50,000
SS = Z2 x (P) x (i-p)/c2
Z = Z valueA (e.g. 1.96 for a confidence level)
P = Percentage of population picking a choice, expressed as decimalB.
C = Confidence interval, expressed as decimal.
(e.g. 0.04 = +/- 4 percentage points)
AZ values (Cumulative Normal Probability Table)
1.645 = 90% Confidence level
1.96 = 95% Confidence level
2.576 = 99% Confidence level
SS = 3.8416 x 0.5 x 0.5 / 0.0016 = 0.9604 / 0.004
= 600.25 or 600.

Sampling Technique

Convenient sampling technique was followed in approaching the respondents. Respondents were requested to provide information by answering the questions stated in the questionnaire. Before questionnaire was distributed a pilot study was conducted to see whether the questions asked were sufficient and as per the experience of conducting pilot study the final questionnaire was finalised. Likert different points of scale technique was following in framing the questionnaire.

Sample Table

Type of companies	No. of approached	Total Respondents
10 Software companies	10 x 30	300
10 Pharmaceutical areas	10 x 30	300
Total		600

Review of Literature

ArmanKarimi and KeyvanGholami (2014) revealed in their research work that measuring IC is not so easy, and is taking the initial steps of development. Over the years as per the researchers on account of difference between book value and market value of companies there is increased importance given to IC. Further they have stated that none of the models can meet all the desired objectives and each method depends on the existing target and position.

William Schang et al., (2011) have expressed that VAIC method allows managers to measure their IC and to benchmark against the competitors in the same industry. Further the authors stated that VAIC measures may not enough to value the companies performance in terms of value added of their intangible. Synthesizing the literature (Bounfour 2002, Ross et al. 1997) the study added R&D expenditure into the VAIC method sharing the better explanation in the management of knowlegde based economy.

Maria LuminitaGogan (2014) stated that despite importance is given to the methods of measuring IC, and even if offers a high degree of transparency of the organisation and operations of intellecutal wealth, they may not provide a complete picture on account of measuring the intangible asset, and the connection between some forms of capital and economic growth is weak, almost non existent. Further the researcher has stated that importance given IC is no longer seen as a stock, a durable good but a sustainable process indicating that every organisation should start measuring the components of IC since they are a source of competitive advantage.

Waheed Akbar Bhatti et al. (2014) have expressed that the effective utilisation of IC resources enables an organisation to grow to an industrial leader status. Further the authors have stated that awareness among managers has to be created for nurturing organisations intellectual capital and effectively managing their daily affairs. They will be able to devise better strategies, processes and methods to manage IC.

Steenkamp and Kashyap (2010) have stated that the empirical studies investing perceptions of management regarding contribution and importance of IC are not enough. Further they have stated that theree is a need to research this in a different environment of

a growing service industry to find out whether management is aware of the contribution of IC makes to business.

Survey Findings

Table-1 reveals data about demographic profile of respondents. Out of 600 respondents 480 are males and the remaining 20% are females. Chi-square statistical tool fails to accept the H0 and accepts H1 that there is significant variation in the data. 520 respondents are married and the remaining 80 are single. Chi-square metric fails to accept the H0 that there is no significant variation in the data and accepts the alternative that there exist significant variations in the data. There are 150 respondents who are in the age group of 33-37 years, 120 in the group of 38-42, 100 in the 43-46, 90 belongs to the age group of 47 and above, 60 belongs to 28-32 years. Chi-square metric fails to accept the H0 and accepts the alternative that there exists significant variation in the data.

Table also provides data on qualification of respondents 180 respondents are general degree holders, 160 are post graduates, 90 engineering graduates, CA and ICWA professional degree holders, 80 connected PUC 50, 10th Pass and 40 are law LLM graduates. Chi-square test fails to accept null hypotheses that there exists no significant variation in the data and accepts the alternative that there exists significant variation in the data. There are 160 respondents who have put in a service of >10 years, 140 in between 6-10 years, 120 in between 3-5 years, 100 in between 1-2 years. Chi-square fails to accept the H0 and there is no significant variations in the data and accepts the alternative that there exists significant variation in the data. Regarding monthly income of respondents the table reveals that there are 170 respondents getting a monghly income in the range of Rs. 41K-50K, 130 in between 51K-60K, 80 in between 31K-40K, 70 in between 21K-30K, 50 in between 11K-20K, and 40 respondents getting Rs <10K and 20 getting > 70 K per month. Chi-square statistical tool fails to accept the H0 that there is no significant variations in the data and accepts the alternative that there exist signfiicant variation in the data.

Table-2 reveals data about knowledge influencing intellectual capital. The influences varies from fortunes and values of the firms is conditioned by how well the firms creates, capture and leverage their knowledge to knowledge influences market channels, customers, supplier relations etc., 330 respondents out of 600 who have strongly agrees, 71 said about human capital knowledge, 60 about relational capital and 68 about structural capital, 62 about how forutnues of firms is conditioned by how well the firms create capture, and leverage their knowledge and 60 about knowledge of relationships, processes, discoveries market presence. Out of 220 who said agree, 51 said about human capital, 48 about structural capital, 43 about relational capital and 40 about knowledge influencing relations, processes, discoveries, market presence, 40 about knowledge experience impacting relationship, processes, discoveries etc., Out of 50 who said disagree, 15 said about knowledge influencing relations processes etc., 12 about structural capital, 8 each about knowledge as a sum of synergy of a firms knowledge experience, relationships, processes, discoveried etc., and knowledge influences customers and supplier relations etc., ANOVA test fails to accept H0 and accepts H1 and therefore it is concluded here that there exist significant variations in the data and respondents are aware that how knoweldge influences IC.

Table-3 reveals data about benefits received from efficient management of IC and value creation efficient drivers varies from IC management and measurement as a tool converts organisation vision into action and thus creates value to IC provides indicators to the management assisting them to develop a way in which IC evolves as a structure and influences the value creation. Table reveals that there are 345 respondents out of 600 who have agreed strongly over the statements driving efficient management of IC and value cration followed by 200 agree, 25 disagree and 30 strongly disagree. Out of 345 who said strongly agree 72 said about the driver of competitive advantage, 70 each about conversion of vision into action and thus creates value and provides indicators to the managers assisting them to develop a way in whic IC evolves as a structure and influence the value action, and 68 about market cap and book value are increasingly out of whack and hence the management of the same assure significance.

out of 200 who said agree 48 said about assists managers to develop a way in which IC evolves as a structure and invluence the value creation, 45 said conversion of vision into action and thus creates value, 40 said about competitive advantage, 35 about manages well since intangible assets, and 32 about management of market cap and book values are increasingly out of whack. 25 respondents said disagree and 6 each said about manages well the intangible assets and provides a way in whick IC emerges as a structure and influences value creation. Out of 30 who said strongly disagree, 7 said about manages well the intangible assets, 8 about assisting managers to find a way and thus influences value creation and 6 about conversion of vision into action and thus creates value. ANOVA statistical tool fails to accept H0 and accepts H1. Therefore it can be concluded that there exists significant variation in the data.

Table-4 reveals information about challenges to be faced by the managers in managing IC. These challenges varies from the challenge of information and its update with changes to adjusting personnel policies. 350 respondents out of 600 said strongly agree over the drivers driving the challenges to be faced by the managers followed by 190 agree, 10 stood next to 30 disagree and 20 strongly disagree. Out of the 360 respondents who said strongly agree 80 said about assuring employee satisfaction, 75 about influences of information and its updatement. 70 bout keeping a high level of service to be provided to the community, 65 about distribution of knowledge across organiation and 60 about adjusting peronnel policies. Out of 190 who said agree, 45 said about the challenge of assuring employee satisfaction, 40 each about inflow of information and adjusting personnel policies 35 said about keeping a high level of service provided for the community, and 30 said about distributon of knowledge across the organisation.

Out of 10 who stood neutral 3 said about assuring the employees, 2 said about adjusting personal policies and further 2 each about in flow of information and its updatement. Out of 30 who said disagree a mainly of 8 said about assuring employee satisfaction, 7 about distribution of knowledge across to organisation and 5 about keeping a high level of service provided for comments. Out of 20 who strongly disagree 6 said about assuring employee satisfaction, 4 each about in flow of information and adjusting personnel policies. ANOVA statistical tool fails to accept H0 and accepts H1. Therefore it is concluded here that there exist significant variatons in the data and respnodents are aware of challenges to be faced or the manager at the time of manageing IC.

Conclusion

Bengaluru is a silicon valley and most popular software industries are found. Global gaints of software and pharma companies have established their unit in Bengaluru. The bipolar opinions expressed by 600 samples clearly tell us intellectual capital in Bengaluru is impacting firms performance, profitability and productivity. Knowledge has been recognised as a valuable resource by researchers. Intellectual capital simply refers to knowledge resources of an organisation. Success of any firm depends upon its ability to create, capture, discover, disseminating and measuring knowledge. Knowledge creation, learning and showing has been given top most importance in Bengaluru's softwares and pharma companies for that purpose they invest huge sums.

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Table - 1 : Demographic Profile of the respondents

Variable		No. of Respondents	%	x^2 value
1. Gender	Male	480	80	= 216 & sig = 5%
	Female	120	20	The calculated value being higher than the tv = 3.841, df = 1 fails to accept that there is no significant variation in the data & accepts H1.
2. Marital Status	Married	520	87	= 322.67, sig. = 5%
	Single	80	13	The calculated value being higher than the TV=3.841 fails to accept H0 i.e., that there is no significant variation in the data and accepts H1
3. Age(in years)	18 - 22	30	5	=123.35411
	23 - 27	50	8	the calculated value being
	28 - 32	60	10	123.3544 higher than the
	33 - 37	150	25	tv = 12.952 @ 5% level
	38 - 42	120	20	of significance with df = 6
	43 - 46	100	17	fails to accept the H0 that
	47 and above	90	15	is there is no significant variation in the data and accepts alternative that there exist variation.
4. Qualification	10th standard	50	8	= 160
	PUC	80	13	The calculated value
	General Degree BA, BCom, BBA, etc.	180	30	being 166 higher than TV = 11.070 with df = 5
	Post Graduation M.Com., MA, MCA etc.	160	27	and at 5% level of significance fails to
	Engineering, CA, ICWA	90	15	accept H0 i.e., there exist
	Law/LLM graduates	40	7	no significant variation in
	Total	600	100	the data and accepts alternative that there

				exists significant variation in the data.
5. Present Employment with service in yrs.	< 1 year	80	13	= 33.333 The calculated value being higher than the TV = 11.070 @ 5% level of significance with df = 5 fails to accept H0 to that there is no significant variation in the data and accepts the alternative that there exist variation.
	1 - 2 years	100	17	
	3 - 5 years	120	20	
	6 - 10 years	140	23	
	> 10 years	160	27	
	Total	600	100	
6. Monthly Income (in Rs)				= 242.6664 The calculated value being 242.6664 higher than the TV = 14.067 @ 5% level of significant with df = 7 fails to accept H0 and accepts the alternative that there exist significant variation in the data.
	< Rs. 10K	40	7	
	11K - 20K	50	8	
	21K - 30K	70	12	
	31K - 40K	80	13	
	41K - 50K	170	28	
	51K - 60K	130	22	
	61K - 70K	40	7	
	> 71K	20	3	
	Total	600	100	

Source: Field Survey

Table-2 : Influence of knowledge on Intellectual Capital

Knowledge Influencing IC	SA	A	DA	T
The fortunes and values of firms is consisted by how well the firms create, capture and leverage their knowledge	62	38	7	
It is the sum of synergy of a firms knowledge experience relationships, processes, discoveries, market prsence and community influence.	60	40	8	
Managers has to use the human capital for the attainment of goals and employees create knowledge (Knowledge, skill, experience, intuition and attitude of work force)	71	51	15	
A sufficient of knowledge of structural capital and how it impacts and deterimes the progressiveness of a firm-strategies, internal network, data base and files, technology invention copyrights, trademarks, trade services etc.,	68	48	12	
Knowledge influences market channels, customers and supplier relationships, industry associations and understanding government policy	69	43	8	
Total	330	220	50	600

Source : Field Survey
Note: SA - Strongly Agree, A - Agree, DA - Disagree

Hypotheses

H0	There exist no significant variation in the data	Reject
H1	There exists significant in the data	Accept

ANOVA Table

Source of variation	SS	df	MS	F-ratio	5% - F Limit (From F Table)
Between the sample	7960	(3-1)=2	7960/2 =3980	3980/21.17 =188	
Within the sample	254	(15-3)=12	254/12 =21.17		(2, 12) =3.88
Total	8214	(15-1)=14			

Source : Field Survey

ANOVA Analysis

The calculated value being 188 being higher than the TV = 3.88 at 5% level with df v1 = 2 and v2 =12 fails to accept H0 and accepts H1.

Table-3 : Benefits of efficient management of intellectual capital and value creation

Drivers of Efficient Management of IC and value creation	SA	A	DA	SDA	T
IC Management and measurement as a tool converts organisation vision into action and thus creates value	70	45	5	6	126
It provides competitive advantage	72	40	4	5	121
It manages well about intangible assets since the amount invested being grown relatively higher than the tangible assets	65	35	6	7	113
Market cap and book value are increasing out of whack and hence the management of the some assumes significance	68	32	4	4	108
They provide indicators to the managers assisting them to develop away in which IC evolves as a structure and influence the value creation	70	48	6	8	132
Total	345	200	25	30	600

Source : Field Survey
Note: SA - Strongly Agree, A - Agree, DA - Disagree, SDA - Strongly Disagree

Hypotheses

H0	There exist no significant variation in the benefits of efficient management of IC and value creation	Reject
H1	There exist significant variation in the benefits of efficient management of IC and value creation	Accept

ANOVA Table

Source of variation	SS	df	MS	F-ratio	5% - F Limit (From F Table)
Between the sample	14110	(4-1)=3	11110/3 =4703.3333	4703.3333/13.75 =342.06	
Within the sample	220	(20-4)=16	220/16 =13.75		(3, 16) =3.24
Total	14330	(20-1)=19			

Source : Field Survey

ANOVA Analysis

The calculated value being 342.06 being higher than the TV = 3.88 at 5% level with df v1 = 3 and v2 = 16 fails to accept H0 and accepts H1.

Table-4 : Challenges to be faced by the managers in managing IC

Challenging variables	SA	A	N	DA	SDA	T
Inflow of informatio& its update with changes	75	40	2	6	4	127
Keeping a high level of service provided for the community. (Recruitement, qualified staff, available of competencies, develping IT structures)	70	35	2	5	3	115
Distribution of knowledge across organiations	65	30	1	7	3	106
Assuring employee satisfaction	80	45	3	8	6	142
Adjusting personnel policy (Family, friendly work place, social responsibility)	60	40	2	4	4	110
Total	350	190	10	30	20	600

Source : Field Survey

Note: SA - Strongly Agree, A - Agree, N - Neutral, DA - Disagree, SDA - Strongly Disagree

Hypotheses

H0	There exist no significant variation in the data	Reject
H1	There exist significant variation in the data	Accept

ANOVA Table

Source of variation	SS	df	MS	F-ratio	5% - F Limit (From F Table)
Between the sample	17600	(5-1)=4	17600/4 =4400	4400/19.9 =221.10	
Within the sample	398	(25-5)=20	398/20 =19.90		(4, 20) =2.87
Total	17998	(25-1)=24			

Source : Field Survey

ANOVA Analysis

The calculated value being 221.10 being higher than the TV = 2.87 at 5% level of significance with df: v1 = 4 and v2 = 20 fails to accept H0 and accepts H1.