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SOCIAL CAPITAL FRAMEWORK: EXAMINING THE ONLINE PUBLIC CONVERSATION ON INDIAN DISCUSSION BOARD

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Abstract: The objective of the study is to examine if the framework of Social Capital Theory can be used to predict participation on social media – discussion boards in particular. Social Capital Theory is examined in all dimensions of Social Capital - structural, relational and cognitive. The study was conducted amongst users of various discussion boards, drawing on a sample of 576, with the help of a structured questionnaire. The data was analyzed using Exploratory Factor Analysis, Confirmatory Factor Analysis and Structural Equation Modeling. The results indicated that there was no relationship between the various dimensions of social capital and participation. Contrary to our expectations, trust was not an important factor of relational capital. However norms of reciprocity, number of people, number of posts, norms and shared language were an important constituent of the dimensions of Social Capital

Key Words: Social Capital, Discussion Board, Participation, Social Media, Structural Equation Modeling.

Introduction

One of the outcomes of the rapid growth of internet and social media has been the growth of virtual communities. One of the most comprehensive definitions of virtual communities has been given by Balasubramaniam & Mahajan (2001). They have defined virtual community as an entity with an aggregation of people, who are rational utility maximisers. The different members interact with each other over the virtual space, while engaging in a social-exchange process of mutual consumption and production. The social interaction takes place around a well understood focus comprising of a shared objective, property or shared interest.

One of the theories that have been used to explain the motivation for sharing knowledge in virtual community is that of social capital theory. The social capital theory suggests that the network of relationships possessed by an individual or a social network and the set of resources embedded in it strongly influence the level of information exchange.

However in a virtual community it is possible that the weak links between members may inhibit the flow of information.

I. Literature Review

There have been different perspectives that have been used to study Social Capital. One view was that of Wellman, Quan-Haase, Witte & Hampton (2001) who distinguished two types of social capital - network and participatory. Another outlook was that of Shah, McLeod & Yoon (2001) who added another aspect to Social Capital, that of interpersonal trust and community.

As Social Capital is a very broad term, it has been subject to a lot of debate with regard to its application as well as definition. Onyx & Bullen (2000) have identified five themes most commonly used by the ones familiar with this concept. The first is that social capital refers to networks: that is, lateral associations that vary in density and occur among both individuals and groups. The second is that social capital is based on reciprocity, defined as the expectation that in the long- or short term, kindnesses and services will be returned. The third theme pertains to trust, people are willing to take risks in a social context based on the belief that the others will respond as expected. The fourth theme is that social capital is based on social norms, the unwritten shared values that direct behavior and interaction. The final theme is personal and collective efficacy which refers to the willingness of citizens to engage within the community. Onyx & Bullen conclude that these components of social capital could vary in intensities in different communities.

Nahapiet & Ghosal (1998) on the other hand have identified three dimensions of social capital, the first being the structure - which consists of the presence of network ties between people, detailed as the density (the number of people known), connectivity (the links between the various people) and hierarchy (whether the people are equals or have difference in status). The second dimension is relational which describes the kind of relationships that people have with each other. It includes aspects like trust, obligations and identity. The relational dimension of social capital refers to the assets created and leveraged through relationships. The third dimension is called cognitive and represents shared meanings and interpretations. It includes shared language, codes and narratives. Their definition is one of the most comprehensive one regarding social capital theory and has been used as a framework to study motivation and virtual communities in several prior research. They distinguished Social capital as being available at an individual level (micro) as well at a collective level (meso-organization level) and macro level (national). Social capital at organization level is viewed as facilitating the creation of new intellectual capabilities by sharing information.

Also of relevance in social capital is the strength of ties - whether the ties between the individuals are strong or weak. Ties can also be referred to as bridging capital (new ties) and bonding capital (old ties). The work of Granovetter (1973) proved to be crucial in the individualistic approach of the social network theory. By focusing on the weak ties, Granovetter highlights the importance of acquaintances in social networks. He argues that

the only thing that can connect two social networks with strong ties is a weak tie. It follows that in an all-covering social network individuals are disadvantageous with a few weak links compared to individuals with multiple weak links as they are disconnected with the other parts of the network. Another interesting observation that Granovetter makes in his work is that specialization of individuals creates the necessity for weak ties as all the other specialist information and knowledge is present in other social networks. The influence of internet on social capital has been debated, with Quan-Haase, Wellman, Witte, & Hampton (2002) identifying internet as destroying social capital while Wellman (2001) found that with internet as a part of everyday life, online social interactions actually increased social capital. Williams (2006) points out that little empirical work has explicitly examined the effects of the Internet on bonding social capital, although some studies have questioned whether the Internet supplements or supplants strong ties. Williams (2006) argues that although researchers have examined potential losses of social capital in offline communities due to increased Internet use, they have not adequately explored online gains that might compensate for this.

Social Capital is also examined by Wasko & Faraj (2005) who examined how individual motives and social capital influence knowledge contribution in electronic network of practice. They found that people contribute their knowledge when they perceive that it enhances their professional reputations, when they have the experience to share, and when they are structurally embedded in the network. Chiu, Hsu, & Wang (2006) used social cognitive and social capital theories to examine the reasons why virtual communities of practice share knowledge. The results of their study indicated that ties between individuals, reciprocity and group identification via the medium of shared language and vision - all of which are a part of the social capital - contribute to the quantity of knowledge sharing

Taking a broad holistic view Vergeer & Pelzer (2009) identified relations between people's media use, network capital as a resource, and loneliness. Their study found that the assumption that traditional and new media destroy social capital is not supported empirically. Moreover, online network capital augments offline network capital and web surfing coincides with more online socializing. However, this additional capital does not appear to have benefits in terms of social support and loneliness. The reverse causal relation between loneliness and media use also could not be established.

From the above literature review it seems clear that dimension of ties - that is the network of people, the relationships between these people, their expectations of reciprocity, trust and social enhancement influence the flow of knowledge. Whether this would also be applicable in communities which are not bound by profession but by common interest and sharing information would be examined in this study.

The literature review did not find any prior research regarding Social Capital in the Indian context with regard to participation / knowledge sharing on social media, therefore the objective of this study was to find out if the social capital theory could be used to explain participation on discussion boards in the Indian context.

II. Research Design

Nahapiet and Ghoshal (1998) referred to structural capital at the organizational level as the network density and centralization of the overall organization or as the overall pattern of connections between individuals. Chiu, Hsu and Wang (2006) in their study referred to structural capital as social interaction ties at individual level. For the purpose of this study, these measures were modified and adapted for the construct on social capital structure. A total of five measures were used for this construct, after modification to reflect the nature of the discussion board. Therefore besides the number of people and frequency of communication (3 measures) the study also included 2 measures for number of comments and posts on the discussion boards.

For examining the relational capital, the study used 13 measures adapted from the study of Chiu, Hsu and Wang (2006). Relational capital includes trust - people have to trust that others in the discussion board will provide the assistance that is sought and will keep the promises they make. Trust is of particular importance in the virtual community (Andrews, Preece & Turoff, 2002; Ridings, Gefen & Arinze, 2002). Relational capital consists of norm of reciprocity or the belief that others will act in a similar manner and return the gesture. It is a sense of mutual indebtedness resulting in individuals reciprocating the benefits received from others, ensuring ongoing supportive exchanges (Shumaker and Brownell, 1984). Even though in the virtual space, the ties are “weak”, prior literature does support that information or knowledge exchange is facilitated by a strong sense of reciprocity along with sense of fairness (Wasko and Faraj, 2000).

Relational capital also takes into account the “we intentions” of the group/community or the extent to which people identify themselves to be a part of the community or group. This in turn affects their willingness to help others. Nahapiet and Ghosal (1998) had in their study defined identification to be the process whereby individuals see themselves as one, with another person or group of people. This identification with the group influences the motivation of the individual to participate in the discussions online and share information.

The third dimension of Social Capital is that of cognitive capital, which refers to those resources that result in shared meaning and interpretations in a community/group. It consists of shared understanding, norms and visions. Shared understanding requires shared language and vocabulary which is a means of communication as well as provides the framework for understanding. Hence understanding of language as well as goals is important in order to motivate people to take part on discussion boards.

For this construct of cognitive capital, the study included seven measures, three of which were for shared language. These were modified/adapted from the study by Chiu, Hsu & Wang 2006. For the other aspect of cognitive capital which is defined as shared vision in Chiu’s study, some of the measures were modified and this construct was renamed as shared norms to better reflect the characteristics of discussion boards.

The final questionnaire had 25 items to measure the three aspects of social capital most of which were adapted from the study of Chiu, Hsu and Wang (2006). The language and wordings of the items were modified to better suit the characteristics of discussion boards, where the objective is information search rather than sharing knowledge and to make it easier for the Indian respondents to understand the items.

The questionnaire also included an open ended statement to check for how often the respondents log on to the discussion boards. The study classified the frequency of participation as 1= for those who logged in every day, 2= for those who logged on, once a week or several times during the week. While 3= those who visited the discussion board with a gap of more than a week between each visit but at least once a month.

Hypotheses

The social structure of a member consists of the social interaction ties which have been considered as channel of both information and resource flow (Tsai & Ghosal, 1998). Whereas Granovetter (1973) considered amount of time, emotional intensity, intimacy and reciprocal services as characteristics of network ties. Nahapiet and Ghoshal (1998) have considered network ties as the key to accessing resources. For this study which focuses on discussion boards, the number of posts and number of members both were taken to be indicative of ties as well as frequency of communication. Thus the hypotheses are:

H1a: Higher number of posts will affect a member's social structure positively

H1b: Higher number of members will affect a member's social structure positively

H1c: Member's social structure will affect participation positively

Trust has been viewed as a set of specific beliefs, dealing with integrity and benevolence of another party (Mayer, 1995; Gefen, Karahana, & Straub, 2003). It is an individual's expectation that members in a virtual community will follow a generally accepted set of values and principles. Trust has been recognized as a critical factor with regard to online transactions, and virtual communities (Ridings, Gefen & Arinze, 2002; Chang, Cheung & Lai 2005). As per Nahapiet and Ghoshal (1998), trust between parties leads to more cooperative interactions. Similarly Blau (1964) considers it to be responsible for creating and maintaining exchange relationships. It follows that trust is of particular importance in an online environment where the contributions to content are voluntary in nature.

Thibaut & Kelly (1959) have used social cognitive theory to explain that participants expect mutual reciprocity that does justice to the time and effort spent sharing their knowledge. Davenport & Prusak (1998) have identified it as one of the drivers in knowledge sharing as have Wasko & Faraj (2005) in their study of network of practice. Mutual reciprocity can be extended to information sharing in discussion board in a broader setting.

Identification is seen as a process where individuals see themselves as one with another person or group (Nahapiet and Ghoshal, 1998). It includes sense of belonging and positive attitude similar to emotional identification (Ellemers, Kortekaas & Ouwerker,

1999). It explains an individual's willingness to maintain relationships within virtual communities (Bagozzi & Dholakia, 2002). While share identity can act as a resource, diverse or contradictory identity can be a barrier to information sharing. Thus the hypothesis

H2a: Higher level of trust will affect a member's relational capital positively

H2b: Higher level of norms of reciprocity will affect a member's relational capital positively

H2c: Higher level of shared identity will affect a member's relational capital positively

H2d: A member's relational capital will affect a member's participation positively

Shared language also includes shared codes which help in reaching common understanding as well as the proper way of acting in a virtual community.

Shared language helps people gain access to other people and information as well as a basis for evaluation. (Tsai and Ghosal, 1998). Cohen and Prusak (2001) state that shared values, goals and norms bind members in a network and communities and make cooperative action possible. Thus the hypotheses are:

H3a: Higher level of norms will affect a member's cognitive capital positively

H3b: Higher level of shared language will affect a member's cognitive capital positively

H3c: A member's cognitive capital will affect a member's participation positively

For the purpose of the study, a questionnaire consisting of 33 questions was used to gather the responses. An email with the link to the questionnaire was sent to a mailing list of 50,000 internet users across India. An email was sent out on 8th July 2013 and a reminder was sent on 11th August 2013. This elicited a response of over 1,017 out of which 576 responses were retained, and the others discarded view they were from outside India, or in some cases did not use discussion boards.

The study has made use of Exploratory Factor Analysis to identify major factors and then CFA and SEM to test these factors in order to understand the reasons for participation with the help of the social capital theory framework in the Indian Context. EFA, CFA and SEM methods have foundation in several of the motivational studies carried out earlier (Wasko and Faraj, 2005; Chiu, Hsu & Wang, 2006) and are considered appropriate for the purposed of achieving the objectives of this research study.

III. Results and Discussions

3.1 Demographic Profile

The demographic profile is done for three demographic variables, namely, age, gender and income. The age wise breakup of the respondents is shown in Figure 2, and it is clear

that a large majority of respondents - 51% belong to the age group of between 20 to 30 years, while 22 % are in the age group of 30-40 year old. The share of those less than 20 years of age is negligible at around 2 % as is the share of those over 60 years which is 2 % as well.

The gender breakup of the respondents is given in Figure 3. The number of male respondents is 75 % while the share of the female respondents is at 25 %. This is a comparatively skewed gender distribution as compared to the normal population of internet users.

Figure 4 gives the distribution of the respondents with 22% respondents being in the income group of below Rs. 2,50,000 p.a. while the income group of above Rs. 10,00,000 p.a. also had a share of 22 % of the respondents. The income group of Rs.5,00,000 to 7,50,000 p.a. had a share of 18% of the respondents, as did the income group of Rs. 7,50,000 - 10,00,000 p.a. While 20% of the respondents were in the income group of Rs. 2,50,000 - 5,00,000 p.a.

3.2. Exploratory Factor Analysis

Prior to the measurement of the social capital theory model, the main factors were extracted using the Principal Component method in SPSS 20. The 25 items derived from the prior literature which were used to measure the response were entered into the software and 3 factors were extracted.

Even though there were 6 factors that had an Eigen value of more than 1, three factors based on the scree plot were chosen to be retained, as the scree plot showed a dip after factor 3 before leveling off and remaining flat (Figure 5). The 3 factors explained a total of nearly 40% of the variance extracted.

Reliability Tests: Cronbach Alpha test was carried out in order to determine the internal reliability of the items. The data was entered in SPSS and the output shown in Table 1.

In order to proceed with factor analysis it is important to determine the adequacy of the sample size. One measure is to ensure that the number of respondents is at least 5 times the number of the items being examined. In this case the respondent size of 576 is 23 times the number of items (25) and therefore more than adequate.

The KMO and Bartlett's test was undertaken to establish the sampling adequacy. The value should be at least .5, and the closer the value to 1 the more adequate the sample size is. The values for this test are given in table 2.

Similarly the Bartlett's Test is an indication of the strength of relationship between the various variables. In order to proceed with the factor analysis the value of Bartlett Test of sphericity should be less than .5, the value of Bartlett's Test in this study is .00, which is small enough to reject the null hypothesis that the correlation matrix is an identity matrix.

Factors Extracted: The factors extracted were

- a) Cognitive Capital
- b) Relational Capital
- c) Structural Capital

A total of 20 items out of the 25 that were tested, were retained with loadings of over .4. The remaining 5 variables had factor loadings of below .4, therefore they were dropped. The items which loaded onto Cognitive Capital were seven in all. These included “I participate as I believe that the members of the discussion boards accept the rules of using the board”, “I participate as I believe the members in the discussion boards understand the rules and conditions of participation”, “ I participate as I believe that the members of the discussion boards follow the rules of using the board”, “I participate as I believe that the members in the discussion boards use understandable language to post “, “I participate as I feel that the members of the discussion boards believe that they understand others”, “I participate as I believe that the members in my discussion board would not knowingly do anything to disrupt the conversation”, “I participate as I believe that the members in my discussion board will not take advantage of others”.

Cognitive capital measures the aspects of norms or rules / what is acceptable and what is not and shared understanding which includes language, symbol etc. Variables like “members feel a sense of belonging” and “members feel proud to be a part of the board” are not considered a part of this as the factor loadings are below .4, while item “members are truthful in dealing with each other” was also dropped view almost identical factor loading onto two factors. The factor loadings are giving in table 3.

Relational Capital Factor takes into account the trust, identification and norms of reciprocity elements. Items which measure this load onto this factor e.g. “I believe other members will help me if I help others”, “I have received help when I have asked for help”, “I believe other members will help me if I need help”. Also items like “members behave in a consistent manner”, “members will keep promises they make”, “members frequently communicate with each other”, “I feel a sense of togetherness”, “I have strong positive feelings towards the members of the board” and “members post comments as desired by others” load onto this factor. One item “I’ve helped others when they’ve asked for help” had a low factor loading (.390) and was not considered to be a part of this factor.

Structural Capital Factor had only three measurable items which loaded onto it, “I’m likely to participate if the board has a large number of people”, “I believe a discussion board should have a large number of people to be successful”, “I participate if the discussion board has a large number of posts”. Another item “I believe a large number of posts/comments make a discussion board useful” had a loading of below .4 and was not considered a part of this factor.

Descriptive Statistics

The descriptive statistics are given in the table 4. It gives us the mean and the standard deviation of the variables under study. The data was checked for skewness and kurtosis,

none of the figures were more than 3 establishing that the data was not skewed, and the figures were also less than 10, thereby demonstrating that the data was normally distributed.

3.3 Confirmatory Factor Analysis

Based on the factors extracted from the EFA, the Confirmatory Factor Analysis was then run in order to test the model.

The CFA was run on AMOS 22, using the Maximum Likelihood Method. For the CFA, a more rigorous process of retaining only those variables with a factor loading of over 0.5 was followed. This resulted in a total of 15 variables being used to test for the model. On further examination of the variables, it was further decided to drop three more variables given that they had fairly high cross loadings onto other factors. The CFA model was run with 12 variables and the model fit is given in the table 5 below. The various fit were within the acceptable levels with both the GFI and CFI being over .90. The badness of fit indicated by RMSEA and RMSR were also within the acceptable levels of less than .80 and .60 respectively.

The CRs value are all above the 0.60 indicating a good reliability fit (Table 6) while the AVES are also higher than the squared estimate values of the correlation between the three constructs (Table 7).

The hypotheses formulated for this study were checked and the findings were:

H1a: Higher number of posts in a discussion board will affect a member's social structure positively

H1b: Higher number of members in a discussion board will affect a member's social structure positively

Both high number of posts and members affect the member's social structure as is apparent from the high regression weights for these variables with the construct. Therefore the hypotheses H1a and H1b can be accepted.

H2a: Higher level of trust will affect a member's relational capital positively

H2b: Higher level of norms of reciprocity will affect a member's relational capital positively

H2c: Higher level of shared identity will affect a member's relational capital positively

The only variables that load onto the construct of relational capital for the model measurement were those of norms of reciprocity, hence the hypothesis H2b is accepted, and the others are rejected.

H3a: Higher level of norms will affect a member's cognitive capital positively

H3b: Higher level of shared language will affect a member's cognitive capital positively

Both the hypotheses are accepted as the variables for shared language and norms load onto the construct with significant regression weights.

3.4 Structural Equation Modeling: Social Capital

Based on prior literature, the hypothesis was that the three elements of social capital namely, cognitive, relational and structure would influence participation on discussion boards.

The second order model was built, linking these factors with participation with one headed arrows to establish the effect of these factors on participation. The path diagram is shown in the figure 7.

Assessment of the Model Fit: The model fit indices indicate a good fit with GFI of .956, CFI at .922, standardized RMR at .0532 and RMSEA at .056, these are given in the table 8.

In order to test for the hypothesis that participation is dependent on the social capital elements the path coefficients were examined. The relationship between participation and relational capital, social capital structure and cognitive capital were not significant (path coefficients = 0.067,-0.009, 0.074).

Hypothesis

H1c: Member's social structure will affect participation positively

The relationship between the social structure and participation is negative and not significant. The path co-efficient value is -.009 which is too low to be significant.

H2d: A member's relational capital will affect a member's participation positively

The relationship between the relational capital and participation is positive but the value at .067 is too low to be significant.

H3c: A member's cognitive capital will affect a member's participation positively

The relationship between the cognitive capital and participation is positive but not significant. The path co-efficient value is .074 which is too low to be significant.

Thus the following hypotheses H1c, H2d, H3c were not supported by the findings and the study could not establish a significant relationship between participation and the three elements of social capital.

Social Capital Theory is a commonly used theoretical framework to study the reasons as to why individuals share information/ knowledge in a professional community. It has also been used to study the phenomenon of information sharing on virtual communities as well as social network sites. For the purpose of this study, the framework of Nahapiet & Ghoshal (1998) was used, which had three dimensions, structural, relational and

cognitive capital to examine if it could explain the reasons for participation on discussion boards.

The study found that there was no relationship between participation and any of the three dimensions of social capital namely, relational, cognitive and structural. The path coefficient for the relationship between a member's social structure and participation is $-.009$, which is not significant. There is therefore no positive and significant relationship between a member's social structure and participation.

The relationship between a member's relational capital and participation is indicated by the path coefficient value of 0.067 which is not significant. Therefore the interpretation is that there is no positive and significant relationship between a member's relational capital and participation.

There is no positive and significant relationship between a member's cognitive capital and participation as the path coefficient value for the relationship between a member's cognitive capital and participation is 0.074 .

The elements of relational capital in this study comprised of the reciprocity norms, and other dimensions of relational capital like trust and shared identity did not load onto the factor of "relational capital" indicating that trust and shared identity did not play a role in the reasons for participation on discussion boards. One of the explanations for trust not being a factor in participation could be due to the low risk involved in the discussion board set up. It has been argued that trust is critical only in high risk situations (Coleman, 1990).

IV. Conclusions

The earlier study of Wasko & Faraj (2005) found a positive relationship between the path centrality (similar to capital structure) and helpful contributions. The study however did not find any link between self-rated expertise (part of cognitive capital) and helpful contributions. On the other hand there was a positive and significant link between tenure in field and volume of contribution. There was a negative and significant link between expectation of reciprocity (part of relational capital) and volume of contribution while there was no link between commitment to the network and volume of contribution.

The study by Chiu, Hsu & Wang (2006) had found that social interaction ties (part of social capital structure) reciprocity and identification increased individual's quantity of knowledge sharing but not knowledge quality. Their study also did not find any support for trust on quantity of knowledge sharing, which is in line with the findings of this study. Similarly shared language (part of cognitive capital) did not have any significant impact on knowledge sharing, while shared vision had a negative and significant impact on quantity of knowledge sharing.

However a study by Kankanhaili & Tan (2005) had found that contribution to electronic knowledge repositories was significantly related to identification with community as well as with norms of reciprocity. An explanation for this variation in the result could be due

to the fact that more than medium, it is the ties and relationship between the members of the community that develops could result in social capital.

Chou & He (2011) examined social capital in the context of open source software (OSS) contribution and found that structural capital affected expertise integration in a significant manner. While reciprocity was important, commitment to community (both aspects of relational capital) was not important with respect to expertise integration. Cognitive capital was not related to expertise integration.

Foster, Francescucci & West (2010) studied of motivation for participation on social network sites-Facebook- within the social capital framework as defined by Onyx & Bullen (2000). Their findings suggested a link between community membership (lateral ties or structure) and overall motivation to participate on Facebook. The friendship ties as found in their study are similar to bridging ties as well as bonding ties of social capital. Reciprocity and trust dimension are covered in the information value of their study. While participation confidence and concerns as found in their study relate to the norms and willingness of the members to engage in the community network.

Burke, Kraut & Marlow (2011) had found that time spent on Facebook can be used as a marginal significant predictor for increased bridging social capital. Bridging capital is mainly weak ties, or association with someone who is new, distant or not a part of the individual's core group. Bridging capital can lead to receiving of novel information as a result of the differences between the two members. Bonding capital on the other hand provides emotional support and companionship, tends to occur between close friends and families. Inbound directed communication was a strong predictor of bridging capital while outbound directed communication was not. Directed communication had a significantly larger impact than broadcasting for bridging capital, but differed only marginally from consumption.

Another study on Facebook, Lin & Peng (2011) examined some of the dimensions of social capital (trust, shared values and social interaction ties) and the findings suggested a strong and positive relationship between these dimensions and the continued intention to use Facebook.

The findings of this study seems to suggest that social capital dimensions of trust, shared values, identity, norms and norms of reciprocity may be more important in a media where interaction is more personal, frequent and people have several means (photographs, events and posts) to identify themselves, their affinity and foster ties.

The research question of the study was "Can the framework of Social Capital theory be used to explain participation on discussion boards in the Indian context?" The findings of the study do not validate the social capital theory for participation on discussion boards in the Indian Context. None of the three dimensions of Social Capital examined in the study - Structure, Relational and Cognitive were found to have any significant impact on participation.

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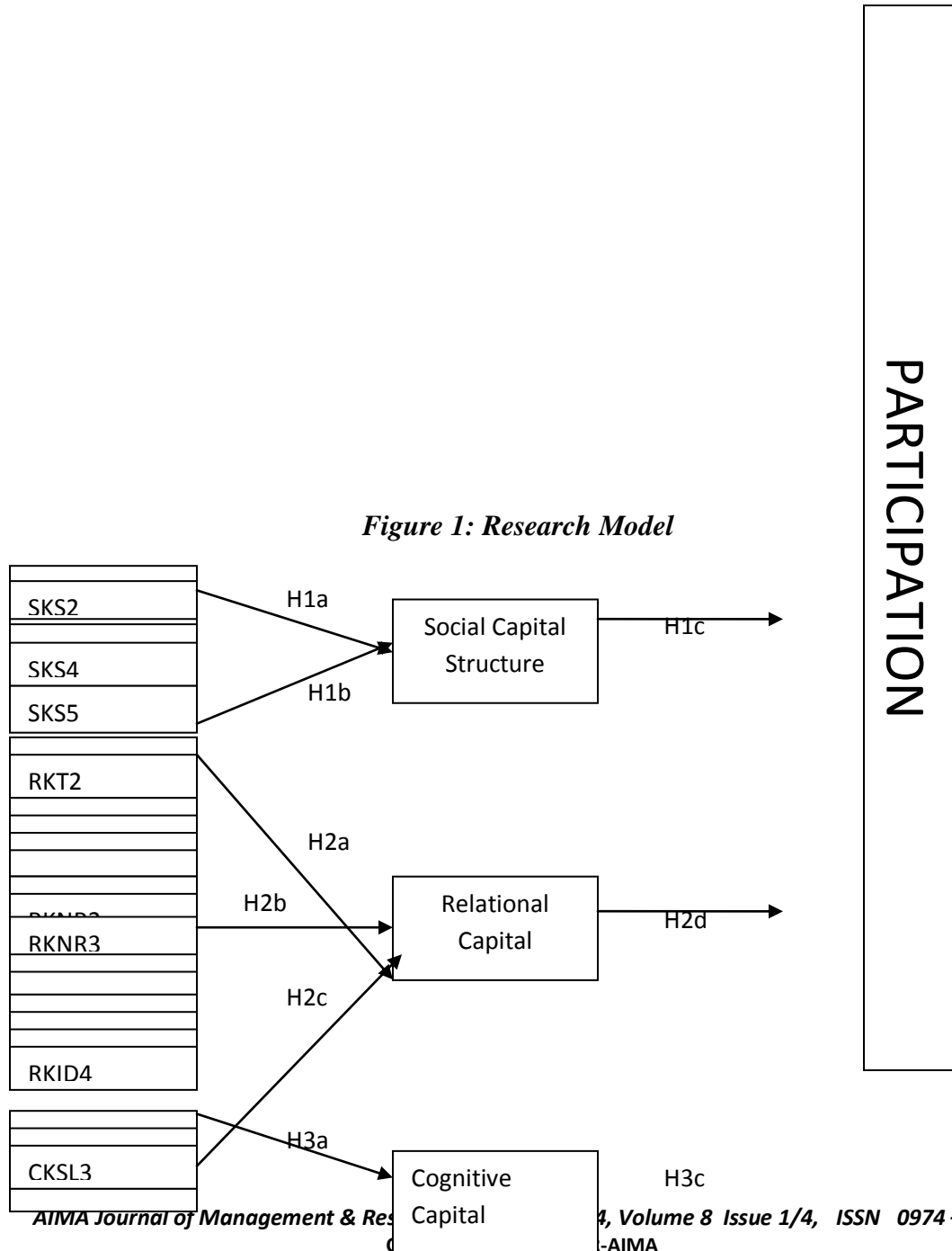
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CKSN2
CKSN4

H3b



Figure 2: Demographic Profile – Age

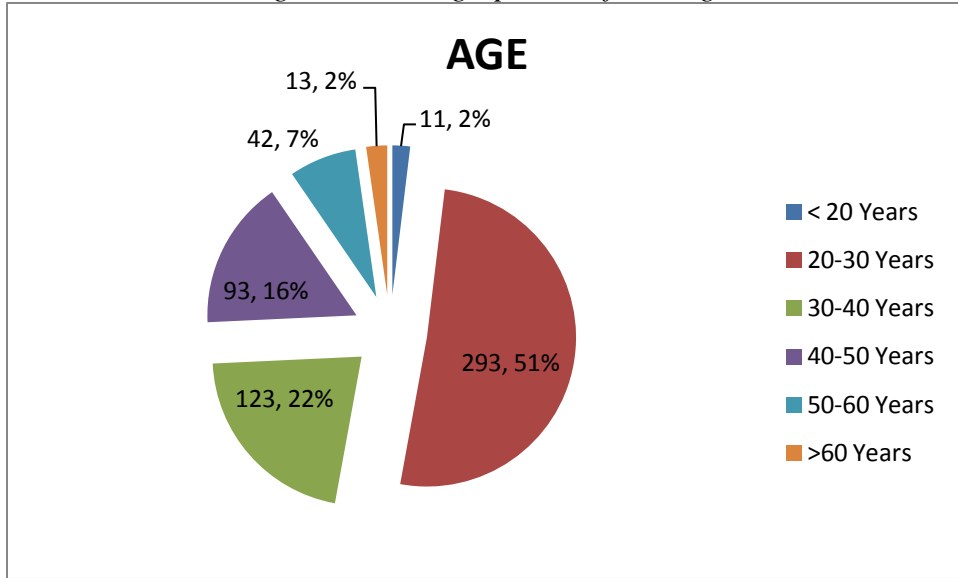


Figure 3: Demographic Profile - Gender

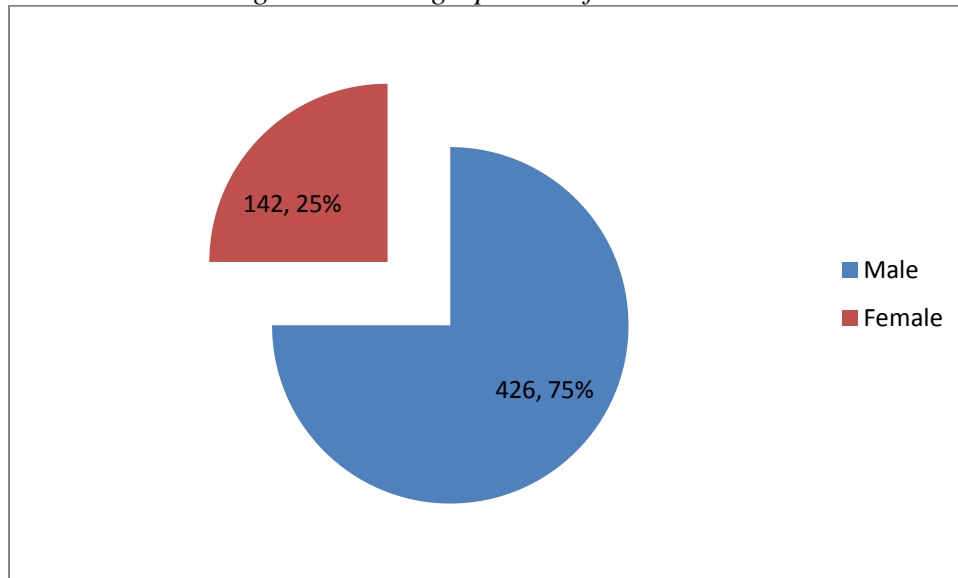


Figure 0: Demographic Profile – Income

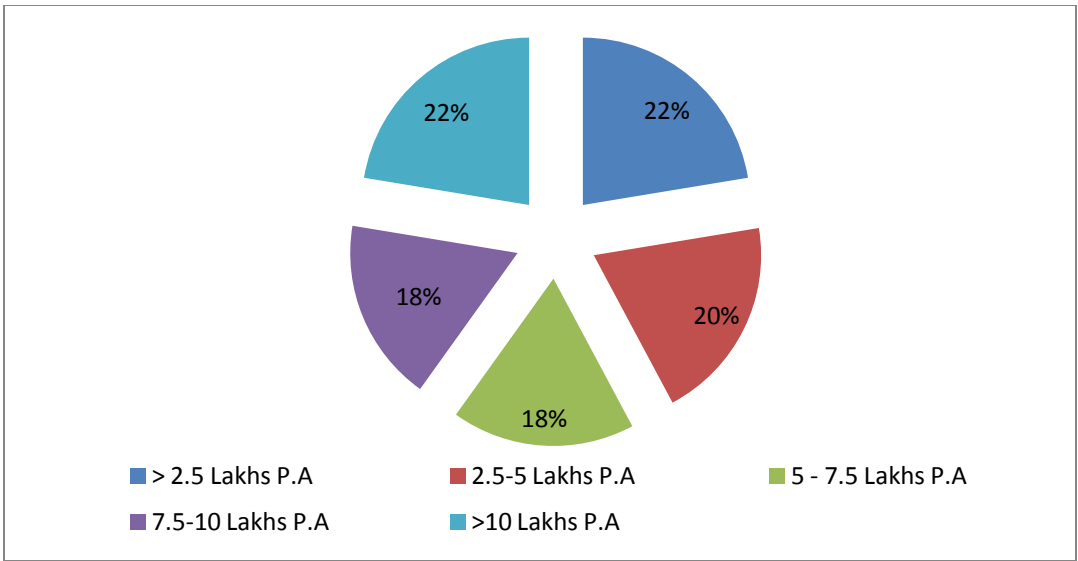


Figure5: Scree Plot - Factor Extraction for Social Capital Theory Study

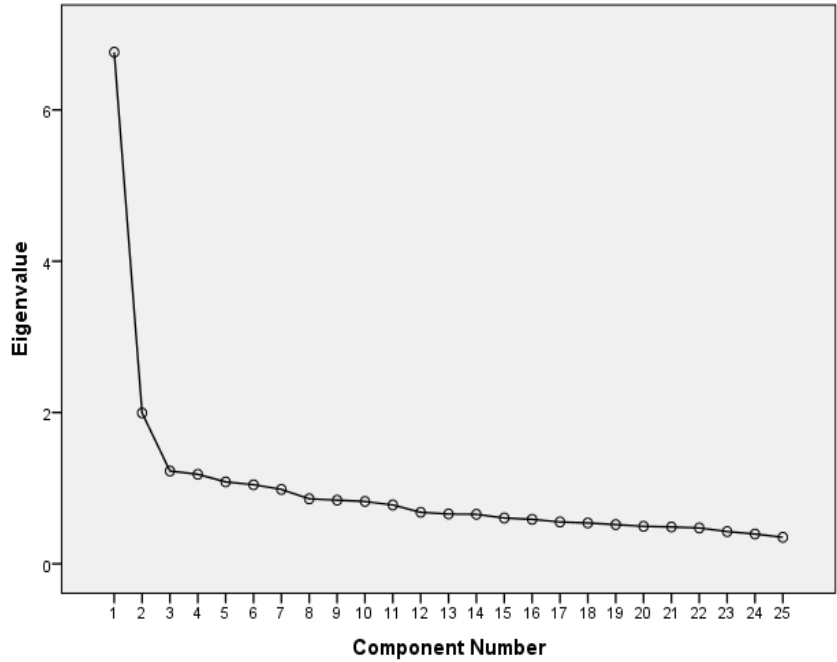


Table 1: Reliability Statistics

Measurement	N of Items	Cronbach's Alpha
FOR EFA	25	.880
FOR CFA	12	.774
Cognitive Capital	7	.758
Relational Capital	13	.811
Structural Capital	5	.666

Table 2 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.904
Bartlett's Test of Sphericity	Approx. Chi-Square	3868.331
	Df	300
	Sig.	.000

Table 3 : Rotated Component Matrix^a

	Component		
	Cognitive	Relational	Structure
ACR (members accept rules)	.652		
RCP (members understand rules & conditions)	.613		
MDF (members follow rules)	.610		
ULA (members use understandable language)	.607		
MDU(members understand each other)	.579		
DIC (members will not knowingly disrupt conversation)	.559		
DDA(members will not take advantage of others)	.489		
TDO(members are truthful in dealing with each other)	.461	.444	
<i>BDB(members feel a sense of belonging towards discussion boards)*</i>			
<i>PDB (members are proud to be a part of discussion boards) *</i>			
OMH (members will help me if I need help)		.688	
PHM (members in my board will help me I help others)		.636	
HAH (I've received help when I have asked for help)		.550	
FRC (Members frequently communicate with each other)		.531	
TDB (I feel a sense of togetherness/closing with members of the board)		.517	
MKP (members will always keep promises they make)		.513	
PFM (I've strong positive feelings towards the members of the board)		.464	
PCD (members post information desired by others)		.462	
MCM (members behave in a consistent manner)		.441	
<i>HPH (I've helped others when they've asked for help) *</i>			
DBL (I'm likely to participate if the board has a large number of people)			.811
NBP (I believe a DB should've a large number of people to be successful)			.726
LNP(I am likely to participate if the discussion boards has a large number of posts)			.725

LCM (I believe a large number of posts/comments make the board useful) *			
SII (I believe members share similar interests) *			

*Loadings were below/ equal to .399

Table 0: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Nbp	576	1	5	2.45	1.086
Pdb	576	1	5	1.87	.811
Acr	576	1	5	1.89	.762
Dic	576	1	5	2.35	1.006
Bdb	576	1	5	1.92	.763
Hah	576	1	5	2.14	.881
Lcm	576	1	5	2.13	.975
Ula	576	1	5	1.97	.788
Lnp	576	1	5	2.59	1.055
Hph	576	1	5	1.85	.826
Mdu	576	1	5	2.09	.846
Dda	576	1	5	2.18	.974
Mkp	576	1	5	2.14	.931
Mcm	576	1	5	2.08	.800
Phm	576	1	5	2.34	.970
Omh	576	1	5	2.21	.856
Frc	576	1	5	1.98	.787
Tdb	576	1	5	2.12	.897
Pfm	576	1	5	2.00	.816
Rcp	576	1	5	1.98	.821
Sii	576	1	5	2.24	.920
Pcd	576	1	5	2.24	.898
Tdo	576	1	5	1.90	.775
Mdf	576	1	5	1.93	.747
Dbf	576	1	5	2.53	1.172
Valid N (listwise)	576				

Figure 6: Social Capital Theory- First Order Model

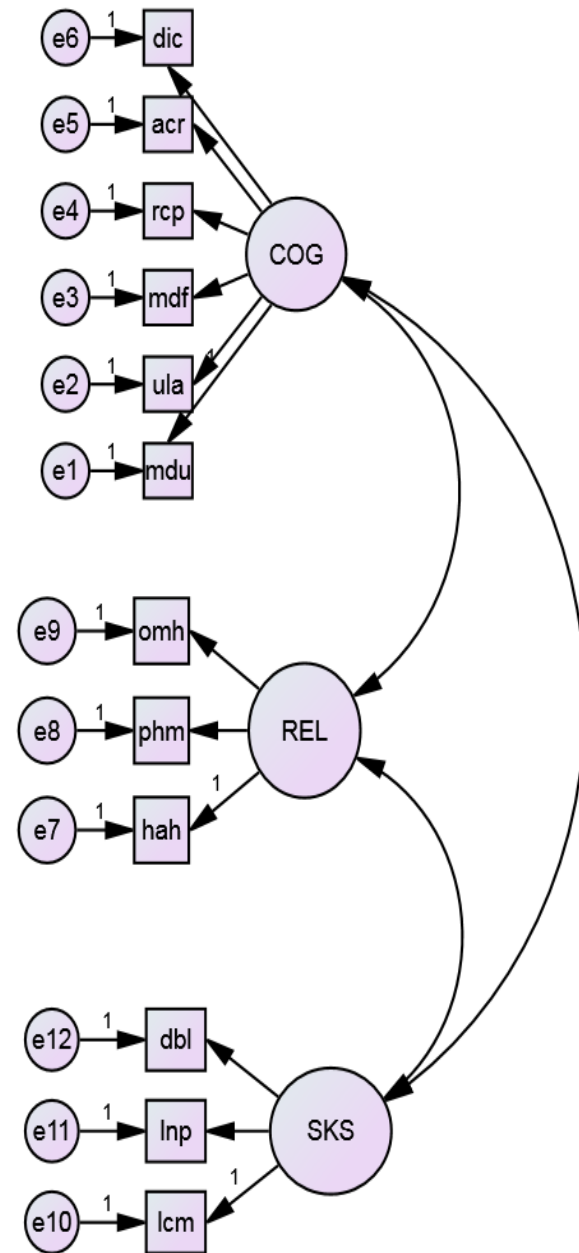


Table 5: Model Fit Indices - Social Capital Theory

CMIN	DF	CMIN/DF	GFI	CFI	RMSEA	RMSR
150.543	51	2.952	.958	.928	.058	.058

Table 6: AVES and CR

CONSTRUCTS	AVES	CR

COGNITIVE CAPITAL	0.3646	0.774
RELATIONAL CAPITAL	0.3936	0.658
STRUCTURAL CAPITAL	0.5699	0.798

Table 7: Discriminant Validity

Discriminant Validity Check			Estimate	Squared Estimate
Discriminant Validity check for Social				
COGNITIVE	<-->	STRUCTURE	0.329	0.108241
RELATIONAL	<-->	STRUCTURE	0.571	0.326041
COGNITIVE	<-->	RELATIONAL	0.557	0.310249

Table 8: Model Fit Indices - Second Order Model - Social Capital Theory

CMIN	DF	CMIN/DF	GFI	CFI	RMSEA	RMSR
168.172	60	2.803	.956	.922	.056	.0532

Figure 7: Social Capital Theory - Second Order Model

