Organizational Social Capital: Indicators and Measurement

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ARTICLE DETAILS	ABSTRACT
History *Revised format:* *Nov 2020* *Available Online:* *Dec 2020* **Keywords** *Organizational social capital, social capital, indicators, determinants, confirmatory factor analysis, measurement*	Social capital is broadly defined as an asset that lies in social networks and relations. Literature highlights that the indicators and a definite model to define social capital is still under a debate. This study focuses on identifying the most common indicators for defining social capital and testing them in the local context of Pakistan. Thorough literature review identified eight common indicators for the structural, relational and cognitive aspects of social capital and an adapted questionnaire was used to obtain data from the selected population i.e. permanent faculty members of University of the Punjab. Confirmatory factor analysis was conducted to test these indicators, which highlighted nine indicators in the factor loadings. Since the theme of most of the factor loadings was similar to the original indicators tested, the model is thus said to be verified. This means that the selected indicators i.e. 'Information sharing' and 'Communication' for Structural Dimension; 'Trust', 'Networks' and 'Collective Action and Cooperation' for Relational Dimension; and 'Shared Vision', 'Social Cohesion and Inclusion' and 'Influence' for Cognitive Dimension have been proven to be valid to gauge the concept of social capital. Furthermore, results highlight that the selected organization has moderate levels of social capital and need to improve the quality of relations among the employees. This paper lays the foundation for Human Resource Practitioners as well as researchers to identify in future researches how Organizational Social Capital can be optimally utilized for improved performance.
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Introduction

In an organizational setting, social capital is defined as "features of social organization that involve mutual trust, norms of reciprocity, and social networks that enable people to act collectively, thereby more effectively pursuing a common purpose" (Loch, Souza, Mesas, Martinez-Gómez, &

Rodríguez-Artalejo, 2015). The topic has been studied at various levels, from national (Fukuyama, 1995) and community (Putnam, 1995) levels to organizational (Leana & Buren, 1999) and individual (Belliveau, O'Reilly, & Wade, 1996) levels. For the purpose of this study, we will be focusing on organizational level social capital. At this level, social capital points towards the quality of relations among members of the organization. The quality is assessed through the nature of relationship among these people as well as through the patterns and flow of communication within the organization. If any particular organization has been found to have higher levels of social capital, it is ascribed to many different advantages, like improved performances, better access to resources, effective communication, optimum use of intellectual capital and more collective action (Adler & Kwon, 2002; Hansen, 1999).

In the current stream of literature, the work on defining and measuring social capital seems to be rather lacking depth and consensus (Poder, 2011). A number of studies have pointed out that there is still a significant debate as to which indicators of social capital are most suitable (Onyx & Bullen, 2000). It is for this reason that this study targets to dig out the most frequently pointed out indicators of social capital and test their validity in the organizational context of Pakistan. Moreover, using the identified indicators, the levels of social capital have been measured in the selected organizational context.

This research aims to highlight the components of healthy relation among the employees in any organizational context. The selected population i.e. Faculty members of University of the Punjab, is particularly important for this study because healthy relations and effective information exchange are one of the vital components of effective teaching. There is an ample literature highlighting that frequent communication and quality oriented interactions among the teachers lead to better performance of the educational institutes (Bryk & Schneider, 2002; Spillane, Halverson, & Diamond, 2001; Hargreaves, 2003) as well as its products i.e. the students of it (Leana & Pil, 2006). Leadership in educational institutes demands an efficient utilization of its social resources to impart knowledge and promote learning. Leaders in these institutes work in collaboration with the teachers to institutionalize any change because teachers are the ones who are in direct contact to the learners (Spillane, Halverson, & Diamond, 2001). On the other hand, public sector, in particular, is known for stringent routines and bureaucratic rigidity (Srason, 1990). Because of these reasons, it is important to come up with more creative and dynamic teaching models, moving from fixed autonomies to flexibility to promote effective transmission of knowledge (McLaughlin & Talbert, 2001). In pursuing this collective goal of enhancing the performance of the educational institutes as well as its products, information sharing, healthy relations among the educationists, sharing the common vision can potentially contribute well (Bryk & Schneider, 2002).

Literature Review
The definition of Social Capital given by Coleman (1988) is of a functional nature. According to him, social capital is comprised of a combination of various social entities. It emphasizes that society is not just an accumulation of individual actions, rather it is system, where people, in pursuing their self-interests, connect to one another, form social relationships and hence become resources for one another. This means that this social capital becomes the source for all these individuals to achieve their self-interest. It signifies the nature and strength of relationship among individuals within an organization (or any other group) entity and defines the pattern of communication (Leana & Pil, 2006). The advantages that can be derived from this setting then are better communication and enhanced utility of intellectual capital (Leana and Van Buren 1999, Hansen 1999). Fukuyama defines it as ""the ability of people to work together for common purposes in groups and organizations" (1995:10). Thomas, on the other hand, defines social capital

as ""those voluntary means and processes developed within civil society which promote development for the collective whole" (1996: 11).

Some of the researchers are of the idea that this multiplicity and confusion in the theoretical confines of the concept is a failure of those working on it, however, others are of the view that this wide array of the concept of social capital can be taken to be "suggestion box rather than a global concept" (Poder, 2011, p. 342).

Poder (2011) thus uses the term 'quasi' for the use of the notion of social capital, which means that different authors have used it in different contexts and for different purposes. What one author means by social capital may not be same as the other author. The indicators that are used for the term, the contexts in which it is used and the levels at which it has been differentiated are all varied widely across the literature. Where the concept was originally used at macro levels for the community researches (Jacobs, 1965) to analyze the resources embedded in its social relations, it has now been applied to micro levels as well to inter-organizational and even intra-organizational studies (Burt, 1992; Nahapiet & Ghoshal, 1998).

Social Capital at Organizational Level: The first person who introduced the notion of social capital at organizational level is Robert Putnam, who has had splendid contributions in popularizing (Poder, 2011) and measuring (Putnam, 1995) it. He defined this concept as "features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (Putnam1995, p. 67). At an organizational level, social capital is taken as an asset based on the relations within the organization, and the investment in such an asset is made whenever a fruitful work-related interaction takes place among the participants of that organization. (Johns, 2006; Leana & Pil, 2006).

Different definitions of social capital hold in the organizational setting. The most appropriate definition has been given by Bourdieu (1980) for social capital at organizational level. According to him, social capital in an organization is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu, 1980, p. 2). Other definitions also suggest that social capital in an organization is basically the goodwill-the goodwill of one individual or a group of individuals towards the other individual or groups. This goodwill is considered as a valuable resource for an organization and it may help in achieving the ultimate organizational objectives and goals (Biggart & Castanias, 2001). Hence, social capital can be defined as relationships that individuals have among themselves and that they have with the organization which aid collective action and enhance overall value of the organization (Adler & Kwon, 2002). It has also been regarded as a resource or an asset that, with its contribution and impact on Human Resource Practices, can influence organizational performance as well (Collins & Clark, 2003). Some researchers have also studied and tested it along with Human Resource Practices and Organizational Performance (Leana & Pil, 2006; Chuang, Chen, & Chuang, 2013; Khalid & Khan, 2014).

Dimensions/Indicators of Social Capital: Nahapiet and Ghoshal (1998) have introduced three dimensions of social capital- structural, relational and cognitive. The structural dimension is about how individuals are connected to one another and how information and communication flows among them. This includes the extent to which the employees are connected; the patterns through which these connections are built and how advantageous are these connections to these members and their subject settings. This has been measured by information sharing by Leana & Pil (2006). Secondly, relational aspect "describes the kind of personal relationships people have developed with each other through a history of interactions". The indicators of this dimension were specified

as trust, shared vision and norms and a sense of associability (Bolino, Turnley, & Bloodgood, 2002). Among these indicators, trust is the key factor to which most of the contributors have agreed upon- like Nahapiet and Ghoshal (1998), Leana and Pil (2006), Bolino et al. (2002).

The cognitive aspect, on the other hand, is about a group of people having a common goal- a shared vision, which binds them together and makes them collaborate and cooperate with one another. This shared vision has been termed as "shared destiny" by Adler & Kwon (2002). The most common indicators of it are common language and narratives among the members (Bolino, Turnley, & Bloodgood, 2002). Zahra (2010) emphasizes the relational aspect of social capital in an organization as among the contributing factors in building relationships among the firms thus enabling them to exchange resources and knowledge. By the exploitation of such resources, the firms in these relations can enhance their performance and credibility among others (Sirmon & Hitt, 2003).

The study conducted by Boyas, et al. (2012) to study the relationship of employment-based social capital with burnout, job stress and intention to leave among workers identified trust, organizational commitment, perception of fairness, peer support and communication levels as indicators of social capital. These indicators are more of relational nature, however, the study pointed out the cognitive dimension of social capital as well. The dimensions of cognitive form of social capital which were then empirically tested in this study were trust (or cooperation), social relations, organizational commitment, communication levels, influence and perception of fairness. By taking these cognitive aspects of social capital, the author establishes that it is this aspect that influences the stress level, and ultimately commitment of employees with the organization. However, where the author states that these selected indicators are the most frequently occurring ones in literature, it has also been made clear that the list is not exhaustive, and a different set of indicators taken for a certain research may give entirely different results. Krishna & Shrader (1999) in their Social Capital Assessment Tool developed for World Bank used values, like trust, solidarity and reciprocity, attitudes, beliefs and behaviors as cognitive aspects of social capital whereas networks and horizontal structures as structural dimensions.

In addition to that, another study has operationalized the structural component as 'network ties', relational component as 'social interaction' and cognitive component as 'relationship quality' (Yli-Renko, Autio, & Sapienza, 2001). 'Social Interaction' here means the extent of relationship that the subject organization has with its customers or clients i.e. to what level are they related and connected. 'Relationship Quality' highlights whether there is goodwill and reciprocity norms in these interactions or not. 'Network Ties', however, signifies the frequency and level with which the existing customers become a source of connection to new potential customers for the firm (Yli-Renko, Autio, & Sapienza, 2001). Mitchell & Bossert (2007) have converged the indicators of social capital to 'organizational membership density' as sturctural dimension and 'social trust' as cognitive dimension.

A study conducted in Pakistan by Saeed & Arshad (2012) pointed out Networking, Social ties, Relationships, Trust, Communication, Information sharing, Collaboration, Reciprocal interaction, Cooperation and Collective action as the possible indicators of social capital, according to the reviewed literature.

With all these indicators pointed out by the researchers over time, after their careful qualitative and empirical analyses, there is of course a need to categorize them into some broad classes that would represent the basic gist of all these indicators pointed out (Krishna & Shrader, 1999). Moreover, Krishna & Shrader (1999) left an open question that if the defining factors or the determinants of social capital and the norms vary across the countries, cultures and contexts; are

there any universal measures that indicate the existence of social capital in any cultural context? Much to answer this and other such questions, some of the most commonly found indicators of social capital have been tried and tested in multiple contexts and countries, which is also the target of this particular research. By taking the most commonly found measures of social capital from the literature, we shall be testing them empirically in our local context to see if they hold valid here in Pakistan. It must be noted here that the scope of this study is confined to what has been defined as internal social capital or intra-organizational social capital (Arregle, Hitt, Sirmon, & Very, 2007).

Methodology
This quantitative, cross-sectional study obtained data through an adapted questionnaire and tested through SPSS (Bryman, 2008). The level of analysis is individual, as the individuals were asked to respond to the survey questionnaires (Creswell, 2009).

Section one of the questionnaire comprises of the demographics, where the respondents were asked to mention their age bracket, their marital status, gender, highest qualification, years of employment in Punjab University and the faculty they are working in. In section two, eight indicators of social capital have been included in the questionnaire i.e. Information sharing, Communication, Trust, Networks, Collective action and cooperation, Shared vision, Social cohesion and inclusion and Influence. Each of these indicators was measured through a set of statements on which the respondents were to mark their level of agreement or disagreement on a five point Likert scale. Here, 'Information Sharing' and 'Communication' are used as the Structural dimensions; 'Trust', 'Networks' and 'Collective Action and Cooperation' are used as Relational dimension; whereas 'Shared Vision', 'Social Cohesion and Inclusion' and 'Influence' are used as Cognitive dimensions. The indicators of Information sharing, Trust and Shared vision were taken from the instrument used by Chuang, Chen, & Chuang (2013).

Six items were used to measure 'Information Sharing' that were originally developed by Hyatt & Ruddy (1997). Similarly, six items were used to measure 'Trust', which were taken from Pearce, Bigley, & Branyiczki (1998). 'Shared Vision' was also measured through six items, two of which were developed by Tsai & Ghoshal (1998) and, remaining four items were developed by Sinkula, Baker, & Noordewier (1997). The indicators of 'Networks', 'Collective Action and Cooperation' and 'Social Cohesion and Inclusion' were taken from the instrument of World Bank developed by Grootaert, Narayan, Woolcock, & Jones (2003). The remaining two indicators i.e. 'Communication' and 'Influence' were taken from the instrument used by Boyas, Wind, & Kang (2012) that was based on the model proposed by Lowe & Schellenberg (2001).

The population selected for this research is the case of University of the Punjab. The reason for selecting this particular institute is because it is the largest case in the sector and may potentially highlight the general levels of organizational social capital in public sector universities in Pakistan. Target respondents were the permanent faculty members of University of the Punjab, Lahore. As the geographic spread of the target population has been taken to be Lahore, other campuses of the university (i.e. those in Gujrat or Jhelum) are outside the scope of this particular research. A sample of 270 respondents was drawn using Simple Random Sampling technique. Out of the 270 questionnaires distributed, 150 were received back, with an acceptable level of response rate at 55.6%, according to Nulty (2008).

Findings & Discussion
As far as validity of the instrument is concerned, pilot testing was done prior to data collection on first thirty questionnaires, from where the face validity of it was verified. The construct validity, however, shall be verified by performing Confirmatory Factor Analysis in the following sections.

Table 1: Reliability Statistics

Factor	No. of items	Cronbach's alpha
Information Sharing	6	0.86
Communication	5	0.71
Trust	6	0.76
Networks	4	0.81
Collective Action and Cooperation	4	0.74
Shared Vision	6	0.91
Social Cohesion and Inclusion	6	0.87
Influence	4	0.81

Since, all the values are greater than 0.6, hence the instrument is considered to be reliable (Bryman, 2008).

Factor Analysis
In order to verify the factor structure of Organizational Social Capital, Confirmatory factor analysis has been performed. This analysis verifies whether the dimensions or indicators taken to measure a construct really do reflect the true meaning and essence of that construct or not (Hair, Black, Babin, & Anderson, 2010). Moreover, CFA also confirms if the identified factor model fits on the given data (DeCoster, 1998).

Assumptions in Factor Analysis
Assumptions to perform Factor analysis are more of conceptual nature than statistical. Firstly there must be some underlying theory or model that feeds into your factor analysis. Then, the variables taken for the purpose must exhibit interrelatedness in order to produce factors that represent them in together. Lastly, there is a concern of adequacy of sample size while performing factor analysis (Hair, Black, Babin, & Anderson, 2010).

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.914
Bartlett's Test of sphericity	Sig.	0.000

This table shows the KMO measure of sampling adequacy to be 0.914. Since it very close to 1 here, hence this value reflects that the sample size was adequate to perform confirmatory factor analysis (Field, 2009). Secondly, to confirm the validity of data, the sigma value for Bartlett's test for sphericity should be less than 0.05 (Sarwar & Qureshi, 2013). The able shows this value to be 0.000 which means it is significant and that the data is valid. This verifies that there is significant correlation among the variables taken.

The table 3 below shows how much of variance is caused due to each factor. The method selected to do this was component analysis, since data reduction is the primary concern (Hair, Black, Babin, & Anderson, 2010). After extraction, 9 factors have been pointed out by SPSS to be most significant in the proposed model. Since we asked for the eigenvalues only to be greater than 1, hence only factors with such eigenvalues have been extracted as being significant. The right most column of the table shows that more than 72 percent of variation is caused by these 9 factors.

Table 3: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	Variance	Cumulative	Total	Variance	Cumulative	Total	Variance	Cumulative
1	16.684	40.691	40.69	16.684	40.69	40.69	6.650	16.219	16.219

2	3.429	8.364	49.056	3.429	8.364	49.056	5.493	13.397	29.616
3	2.104	5.131	54.186	2.104	5.131	54.186	3.960	9.660	39.275
4	1.617	3.943	58.130	1.617	3.943	58.130	3.534	8.618	47.894
5	1.411	3.441	61.571	1.411	3.441	61.571	3.317	8.091	55.984
6	1.260	3.074	64.645	1.260	3.074	64.645	2.215	5.401	61.386
7	1.171	2.856	67.501	1.171	2.856	67.501	1.736	4.235	65.621
8	1.096	2.672	70.173	1.096	2.672	70.173	1.502	3.663	69.284
9	1.008	2.459	72.632	1.008	2.459	72.632	1.372	3.347	72.632
10	.898	2.190	74.822						
11	.781	1.905	76.726						
12	.733	1.789	78.515						
13	.643	1.569	80.084						
14	.631	1.538	81.622						
15	.599	1.460	83.082						
16	.554	1.352	84.434						
17	.529	1.289	85.723						
18	.485	1.184	86.907						
19	.471	1.150	88.057						
20	.446	1.088	89.145						
21	.382	.931	90.076						
22	.371	.904	90.981						
23	.346	.844	91.824						
24	.321	.783	92.608						
25	.283	.689	93.297						
26	.273	.665	93.962						
27	.270	.659	94.620						
28	.241	.589	95.209						
29	.228	.557	95.766						
30	.222	.541	96.307						
31	.199	.485	96.792						
32	.185	.451	97.243						
33	.180	.439	97.682						
34	.158	.386	98.068						
35	.149	.364	98.432						
36	.137	.333	98.765						
37	.126	.307	99.073						
38	.120	.293	99.366						
39	.102	.248	99.614						
40	.086	.210	99.824						
41	.072	.176	100.00						

The scree plot shows that the highest percentage of variance is caused by the first two factors, which can also be cross checked from the table 3 above, where the percentage of variance caused by first two factors is 16 and 13 respectively. No other factor has a percentage variance above 10.

Table 4: Rotated Component Matrix

	1	2	3	4	5	6	7	8	9
Confidence in one another				.776					
Considerate of feelings				.753					
Show integrity	.712								
Can rely on co-workers				.711					
Trustworthiness		.650							

Statement							
Share information	.649	.430					
Keep each other informed	.608	.408					
Constructive criticism	.584						
Open/honest comm.	.581		.425				
Work related information	.570						
No hidden agendas/issues	.519						
Agreement to vision	.813						
Commitment to goals	.755						
Commonality of purpose		.754					
collective goals/ mission	.449	.717					
Same ambition/vision	.448	.682					
partnership in charting direction			.607				
Feeling of togetherness	.424	.518					
Common goals	.485						
Co-workers visit my home			.877				
Visit co-workers' homes			.865				
Get together for recreation			.757				
Meeting in public places			.744				
Participate in ceremonies			.511				
Feedback/ decision imp.				.783			
Truthfulness of boss			.777				
Boss asks for my opinion				.628			
Invited to voice opinion				.595		.435	
Give assistance				.767			
Get assistance			.737				
Count om co-workers				.691			
Cooperation of people					.527		
Close friends at workplace					.471		
influence decisions					.773		
Say in the way group performs tasks						.608	
Cooperation in org. prob.					.472		
Comm. with higher mng.						.797	
Feel valued in interaction						.628	
benefit of organization							.801
Discuss personal problems							.426
No team spirit						.733	

This table shows the factor loadings. We will take the factor loadings that are equal to or greater than 0.5 to identify which statements have been loaded under which factor (Hair, Black, Babin, & Anderson, 2010).

Now to identify the factor to which any given statement belongs, we have to see the highest loading that each variable (i.e. statement) has for any given factor. In this table, the first five statements have been loaded only under one factor each, hence there is no need to look for the highest loading value. As for the sixth and seventh variables, both of them have been loaded under one and second factor each, so we will take the higher of the two values.

Since there are no cross loadings seen in this table, as each variable has a loading equal to 0.5 or higher under only one factor, the identification of corresponding factor becomes easier for each variable. According to the statements that have been loaded under the same factor, the factors have

been renamed. Four statements from the original model have been excluded in this table, since they did not show a significant loading under any factor.

Factor 1
Under factor 1, fourteen statements in total were loaded, out of which 11 were statistically significant to be considered. Since information sharing and communication are similar terms, and trust is also enhanced as the level of communication increases, hence this factor is labeled as 'Communication'.

Factor 2
Ten statements were loaded in total under factor 2, out of which 7 can be seen to be statistically significant. The first five of these statements were used to measure the construct of 'Shared Vision' in the original source (Chuang, Chen, & Chuang, 2013). However, the last statement was used to measure 'Social Cohesion and Inclusion' in the source from where it was taken (Grootaert, Narayan, Woolcock, & Jones, 2003). As all of them, except for just one, were used to measure Shared Vision, the label for this factor may remain the same for our results as well, only with an additional statement to measure it.

Factor 3
Factor 3 showed five loadings under it, all of which were significant. All of these statements were used to measure the construct of 'Social Cohesion and Inclusion' in the source instrument as well (Grootaert, Narayan, Woolcock, & Jones, 2003), hence there is no need to change the label for this.

Factor 4
Factor 4 also had five factor loadings, out of which four were significant. The first two of these statements were used to measure 'Communication' and the other two were used to measure 'Influence' both in the study of Boyas, Wind, & Kang (2012). As the label of communication has already been given to the first factor, we use the label of 'Information Sharing' here since that seems to be the implicit theme in all these statements.

Factor 5
Factor 5 had 5 factor loadings, with only four of them statistically significant. The first three of these statements were used to measure the variable of 'Networks' whereas the last statement was used to measure 'Collective Action and Cooperation' in the source instrument developed by World Bank (Grootaert, Narayan, Woolcock, & Jones, 2003). Since there is only a difference of one statement, hence we shall continue using the label of 'Networks' for this factor.

Factor 6
Factor 6 has three statements loaded under it, two of which were significant. As these statements were used to measure 'Influence', in the source questionnaire (Boyas, Wind, & Kang, 2012), hence there is no need to re-label this one.

Factor 7
Factor 7 had three factor loadings, but only two of them are significant. Because both these statements were used to measure 'Communication' in the original source (Boyas, Wind, & Kang, 2012), and that label has already been given to the first factor, so we shall label this factor as 'Positioning', as both the statements reflect communication that is based on positioning in an organizational hierarchy.

Factor 8

This factor had only two factor loadings, out of which only one was statistically significant. As this statement reflects commitment towards the organization, hence it has been relabeled as 'Organizational Commitment'.

Factor 9

Factor 9 had only one factor loading. As this statement talks about teamwork, hence this factor can be given the label 'Collective Action and Cooperation'

•   Levels of Social Capital

Information Sharing

Since Information Sharing has been measured using 6 statements; hence the maximum score for it can be 5*6= 30 (i.e. if a respondent marks 5 for each statement) and the minimum score can be 1*6= 6 (i.e. if a respondent marks 1 against each statement). To create the three categories of this variable i.e. High, Medium and Low, this range from minimum score to maximum score is to be divided into three classes. To calculate the class interval for these classes, following formula has been used:

Class interval= (upper class limit – lower class limit)/3

In this case, the upper class limit is 30 and the lower class limit is 6, so the interval will be

(30 – 6)/3= 8

So the classes for this variable are:

•   Low (6-14)
•   Medium (15-22)
•   High (23-30)

Now, upon calculating the frequencies, it can be observed how many respondents fall into each respective category of the score.

Table 5: Frequency of Categories of Information Sharing

Information Sharing Categories	Frequency	Percentage
High	41	27.3
Low	29	19.3
Medium	80	53.3

This table shows that majority of the respondents signaled medium levels of information sharing in their organization.

Communication

The same procedure shall be used to create the categories of Communication.

•   Low (5-12)
•   Medium (13-19)
•   High (20-25)

Table 6: Frequency of Categories of Communication

Communication Categories	Frequency	Percentages
High	42	28
Low	14	9
Medium	94	62.7

This table shows that most of the people have pointed out medium levels of communication in their organization.

Trust

•   Low (6-14)
•   Medium (15-22)
•   High (23-30)

Now, upon calculating the frequencies, it can be observed how many respondents fall into each respective category of the score.

Table 7: Frequencies for Categories of Trust

Trust Categories	Frequency	Percentages
High	30	20
Low	18	12
Medium	102	68

This table shows that most of the people have pointed out medium levels of trust in their organization.

Networks
- Low (4-9)
- Medium (10-15)
- High (16-20)

The table 8 below shows that most of the people have pointed out medium levels of Networks in their organization.

Table 8: Frequencies for Categories of Networks

Networks Categories	Frequency	Percentages
High	69	46
Low	7	4.7
Medium	74	49.3

Collective Action and Cooperation
- Low (4-9)
- Medium (10-15)
- High (16-20)

Table 9: Frequencies for Collective Action and Cooperation

Collective Action and Cooperation Categories	Frequency	Percentages
High	70	46.7
Low	4	2.7
Medium	76	50.7

This table shows that most of the people have pointed out medium levels of Collective Action and Cooperation in their organization.

Shared Vision
- Low (6-14)
- Medium (15-22)
- High (23-30)

Table 10: Frequency of Categories of Shared Vision

Shared Vision Categories	Frequency	Percentages
High	56	37.3
Low	26	17.3
Medium	68	45.3

This table shows that most of the people have pointed out medium levels of Shared Vision in their organization.

Social Cohesion and Inclusion
- Low (6-14)
- Medium (15-22)
- High (23-30)

Table 11: Frequency of Categories of Social Cohesion and Inclusion

Social Cohesion and Inclusion Categories	Frequency	Percentages
High	32	21.3
Low	41	27.3

Medium   77   51.3

This table shows that most of the people have pointed out moderate levels of Social Cohesion and Inclusion in their organization.

Influence
- Low (4-9)
- Medium (10-15)
- High (16-20)

The table 12 below shows that most of the people have put forth that they experience moderate level of influence in their organization.

Table 12: Frequencies for categories of Influence

Influence Categories	Frequency	Percentages
High	36	24
Low	17	11.3
Medium	97	64.7

The results of Confirmatory Factor Analysis show that the eight indicators selected in this study were appropriate enough to gauge the concept the Social Capital at organizational level. This Confirmatory Factor Analysis confirms seven out of eight indicators taken from various sources to be the appropriate measure of social capital. Three of these indicators i.e. Information Sharing, Trust and Networks were also confirmed by the study of Leana and Pil (2006). Out of these, the Trust variable had been endorsed by Pearce, Bigley, & Branyiczki (1998) and that of Shared Vision was also verified in the study of Tsai & Ghoshal (1998).

Out of the nine factors that were given in output, the labels for six of them have been reserved because of insignificant changes in their measuring statements. These indicators were Information Sharing, Communication, Shared Vision, Social Cohesion and Inclusion, Networks and Influence. Evidences for the further three factors given in output, that have been labelled as 'Organizational commitment' (Boyas, Wind, & Kang, 2012), 'Positioning' (Lin, 2001) and 'Teamwork' are also found frequently in literature. This confirms two facts here: 1. That the indicators have been rightly pointed out in the literature, and 2. That the indicators taken for the quantitative measurement for the purpose of this study also do measure the concept of social capital adequately.

The 'Trust' indicator highlighted by Poder (2011), Adler and Kwon (2002) has been included in the label of Communication in these results because of the placement of their loadings. However, Information Sharing and Networks used by these two have been confirmed in this study as well. Information Sharing was also used by Leana and Pil (2006) as an indicator of social capital. Networks was also used by Burt (1982), which establishes that this happens to be among the initially identified indicators of social capital at organizational level. Then, Shared Vision, which has been used by Leana and Pil (2006) and Nahapiet and Ghoshal (1998) has also been confirmed in this study. Adler and Kwon (2002) used the term of 'Shared Destiny' for it. Lin (2001) used the term of 'Hierarchal structures' to what has been referred here as 'Positioning', whereas Adler & Kwon (2002) used the term of 'Closure' for it.

To answer the second research question, each indicator of OSC had been assigned three categories i.e. High, Medium and Low and the frequencies of responses for these categories were taken for each indicator. The results show that for each indicator of OSC, the highest percentage of responses fell in the category of medium. This not only shows that a moderate level of social capital has been observed in Punjab University, but also verifies that this set of indicator gauges the concept sufficiently, as each indicator gives similar result. This means that faculty members in Punjab University get along well with one another, but there is still a margin of great improvement in it.

To improve the status and quality of these relations, university must promote some relationship building activities and ensure that the faculty members can have greater confidence among one another and collaborate better for the overall organizational benefits and for the performance of students as well.

Conclusion

The study concludes that Information Sharing, Communication, Trust, Networks, Organizational Commitment, Shared Vision, Social Cohesion and Inclusion, Positioning, Teamwork and Influence are the appropriate indicators to gauge the levels of organizational social capital. As for the levels of social capital analyzed in the subject population, Punjab University has been found to have moderate levels of social capital.

This study sheds light on the fact that organizations can benefit by investing in the development of their internal social capital and sets the foundation for its measurement as well. It also highlights that the target population needs to invest to improve the current levels of its social capital, not only for the expected improvement in its own performance as an organization but for the benefit of its students and other stakeholders as well.

The greatest limitation of this study is the fact that it only entails quantitatively analysis, whereas whenever an abstract concept is to be measured, it should be accompanied by qualitatively analysis as well. Due to the limited time, qualitatively analysis has not been included in this study. Another limitation is the confined population. For better verifiability of the concept and the proposed model, a study should have been conducted on a wider scope of population.

This analysis must be accompanied by the qualitative analysis as well to properly assess the levels of social capital in the target population. Moreover, wider scope of population must be studied, for which a study can be conducted on perhaps all public sector universities of Lahore. Just as literature highlights a significant relation of social capital with organizational performance, this relation can also be tested in this context in future. Similarly, the impact of higher levels of social capital among the teachers on their students must also be empirically tested.

Future studies may also explore the set of HR practices that organizations employ to boost their levels of social capital. Moreover, just as educational sector has been focused in this study, along with the rationale for choosing this sector, the significance, identification and relationship of social capital can also be studied in other sectors as well.

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