

THE INFLUENCE OF ORGANIZATIONAL CULTURAL CHARACTERISTICS ON KNOWLEDGE TRANSFER ACROSS ONE BELT – ONE ROAD: A CASE OF CHINESE COMPANIES INVOLVED IN THE CHINA-PAKISTAN ECONOMIC CORRIDOR (CPEC)

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Abstract

The purpose of this paper is to investigate the relationship between organizational cultural characteristics, knowledge transfer and the role of certain identified organizational cultural aspects in the execution of knowledge transfer in Chinese Multinational Companies involved in CPEC.

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A quantitative research plan was followed. A questionnaire was used to collect the desired data. For this study we identified six factors, including trust among colleagues, communication between organizational staff, information systems, formation of the reward system, and structure of the organization which plays an important and defining role in the interaction between staff members and in providing possibilities to sever barriers to knowledge transfer.

A total of 27 organizations involved in the China Pakistan Economic Corridor (CPEC) are identified. The intended hypothesis was tested by using PLS-SEM, and our research finding indicates that all the variables except information systems did not show positive relationships.

The study proposed that multinational organizations must understand the critical role of organizational culture and interaction among team members in promoting, sharing, and spreading knowledge to perform well and achieve organizational success thereafter.

This study is anticipated to help Chinese MNCs in Pakistan to understand the different cultural characteristics because according to previous studies many multinational companies overlook the impact of culture factors on the sharing of knowledge, while bearing in mind that in the literature there is no specific study regarding Chinese MNCs involved in CPEC. The conclusion of this study will help out knowledge executives charged with the drawing of flexible knowledge management systems.

Keywords: One Belt-One Road (OBOR); China-Pakistan Economic Corridor (CPEC); knowledge transfer; organization culture; reward.

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Introduction

Knowledge sharing (knowledge transfer) nowadays is the most frequently discussed activity in the course of knowledge management (Yew Wong, 2005). For effective promotion and transfer of knowledge, the previous studies show that organizational culture plays an important role and has significant effects. An organizational culture characteristic such as organizational belief, working environment, and its value system promotes or creates discrepancies in knowledge sharing and creation (Van Wijk et al., 2008).

A number of studies have revealed that the organizational culture characteristics play a vital role in facilitating knowledge transfer. Based on compound studies and their findings, the most pertinent characteristics are sovereignty or autonomy, faith in colleagues, belief in employees (Mueller, 2015), organization structure, communication, information system, trust and reward system (Ismail Al-Alawi et al., 2007) as well as having the ability to change and accept the change, universal language and decent customs of trust and hesitation (Nelson & Stolterman, 2003). According to Achrol (1991) associations and businesses are progressively organiz-

ing their work around in task groups. Project approaches are used and utilized as a learning instrument in various associations and businesses (Frels & Onwuegbuzie, 2013).

Moreover, multinational organizations are progressively utilizing transnational projects, while keeping in mind the end goal to execute new procedures and learn new knowledge (Goldstein, 2007) which is why many organizations support venture based learning. To maintain these practices, organizations need to create systems adjusted with its organizational hierarchical setting (Ferreira & Otley, 2009). An investigation into the field of knowledge sharing in projects teams will discover new dimensions that will support competitive advantages in these organizations (Hoegl & Schulze, 2005).

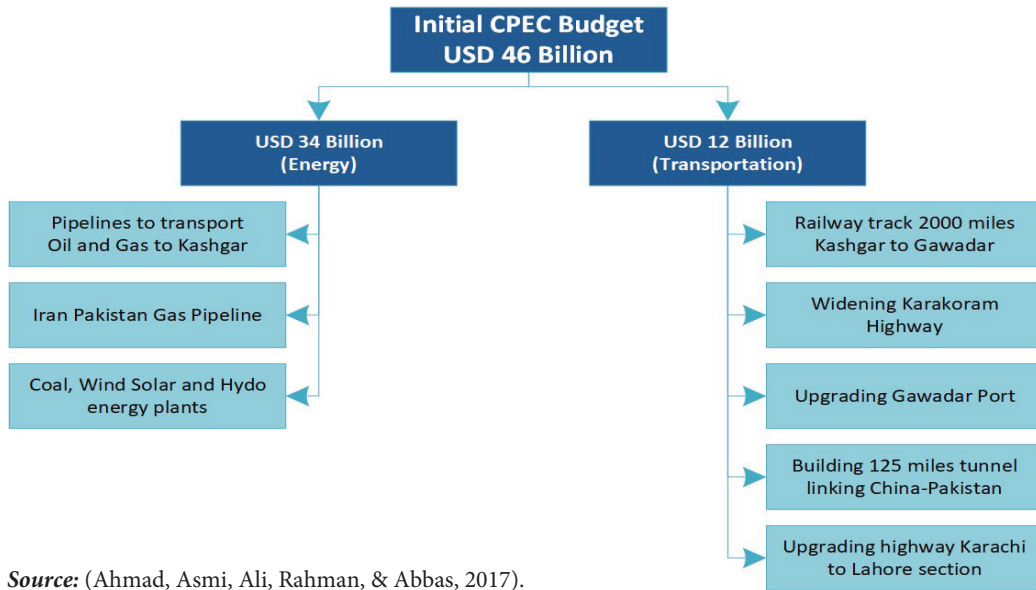
Despite the fact that a few investigations have concentrated on the knowledge sharing procedure in multinational organizations (Regner & Zander, 2011), the greater part of them does not consider venture groups working with individuals of different nations. Consequently, it can be considered to be an under-examined zone. Additionally, as Schimmelfennig et al. (2006) recommend it is important to analyze how organization authoritative culture impacts knowledge transferring procedure in different nations outside Europe, the Unified States or Asian groups.

An overview of CPEC

The Chinese President Xi Jinping's visit in April 2015 to Pakistan is considered to be one of the fundamental exotic and strategic economic deals regarding China's trade policy and its financial growth in the twenty-first century. These economic deals are labeled as the China–Pakistan Economic Corridor (CPEC) in media and literature (Ritzinger, 2015). Under the umbrella of CPEC, a number of infrastructure projects in Pakistan i.e. railway, roads network, communication, and transportation have been financed and carried out by Chinese state companies. However, the two nations' financial relations do not coordinate the profundity of their vital relationship (Shahzad, 2017). The CPEC gives China the most efficient route for it to send out its completed products to the Middle East, Africa, and Europe. It can likewise import oil and different materials through this same route (Hassan, 2018).

In order to complete this venture, the Chinese government is keen to pay out around \$46 billion for CPEC projects and in other developmental deals. This is by far China's main and prime foreign direct investment (FDI) in Pakistan. This is equivalent to 20% of Pakistan's yearly GDP. In total, some \$34 billion will be spent in the power sector to create 17,000 megawatts of electrical energy. The leftover capital will be used to endorse improving the transportation infrastructure, which includes the upgrade and setting up of new railway lines among the city of Peshawar in the northwest of Pakistan and the port city of Karachi located in south of Pakistan (Jinchen, 2016). The project's main aim is to improve the energy and transportation sectors. The CPEC investments tree in Figure 1 shows the allocation of a budget which will be utilized in different energy and transportation sectors in Pakistan.

Figure 1: CPEC Investment Tree



Source: (Ahmad, Asmi, Ali, Rahman, & Abbas, 2017).

Literature Review

Knowledge

The established and classical meaning of knowledge can be defined as “justified true belief, or true opinion combined with reason” (Hilpinen, 1970).

According to Jablonka and Lamb (2007) learning and knowledge emerge due to the association of different people and interaction between them (past experience, instinct, and nature), data and creative thoughts (producing thoughts and envisioning future prospect). There is a significant difference between knowledge and data, and both are considered different entities and should not get mixed with each other; data is considered crude certainties, estimations, and measurements. Also, knowledge is more perplexed than information, because information comes about due to the arranging of data into significant structures. Knowledge is the after effect of translating the required information being impacted by the identity of its holder since it depends on judgment and instinct; knowledge blend convictions, state of mind and conducts (Wilson, 1999).

The business organization or association itself cannot construct knowledge; they can only boost or give an environment to the people in which they can build knowledge. In such a manner, they characterize ‘organization knowledge creation’ as «a procedure that opens up the knowledge built up by the people and crystallizes it within an expanding community of interaction, which crosses between intra and inter-organizational levels and limits» (Staab et al., 2001). In addition, they strengthen the concept of Polanyi (1966), regarding knowledge which expresses that people make knowledge by vigorously making and arranging their own personal encounters and meetings, where the knowledge that can be communicated in words and numbers is just a part of the whole range of knowledge, along the lines of «We can know more than we can tell» (Erik Karlsen & Karlsen, 2007).

The need for knowledge transfer

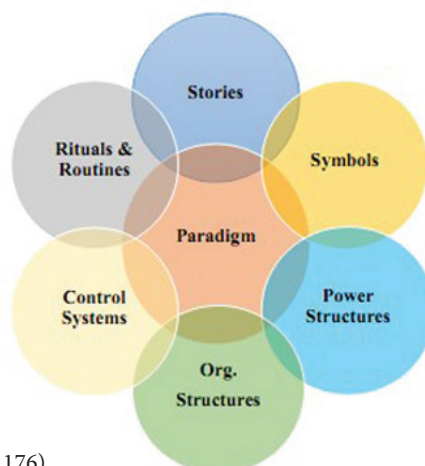
The transferring of knowledge creates “knowledge” at all organizational levels, which becomes a part of the organization’s framework, procedure, and systems. Knowledge which is considered an important part of the organization’s basic capital structure is implanted into an organization’s current practices and procedures and therefore more visible than individual knowledge which remains in the minds of individual employees. Knowledge can frequently be classified and end up inserted into an organization’s frameworks and training procedures. But still, some knowledge cannot really be voiced or represented outside the individual employee’s mind (Gold, Malhotra & Segars, 2001).

A firm, therefore, needs the ability and capacities to acquire this knowledge and to know the potential of the acquired knowledge and also ought to have the capacity to fuse this knowledge into their organization’s structure in an effortlessly available place. This mix and reconciliation process finishes the knowledge exchange and information turns out to be a portion of the organization’s knowledge stocks and reestablishes an organization’s aptitudes and capacities (Stehr, 2015).

Organizational culture

While referring to Hofstede et al. (2010), they characterize the culture as «the aggregate programming of the mind that recognizes the individuals from one gathering or class of individuals from others». As indicated by Brown and Iverson (2004), organizational culture is «the underestimated suppositions and practices that comprehend individuals’ organizational perspective». A way to perform such investigation is through the ‘culture web’ framework design by Johnson et al. (2011), as according to that structure the ‘paradigm’ is the center of the culture web, it alludes to the aggregate experience connected to a circumstance so it can understand it and illuminate a conceivable game-plan at the end of the day, it identifies with the underestimated suppositions in the organization. Individuals carry on in accordance with the paradigm, in this way understanding what it is and how it advises matters for characterizing and defining future strategies.

Figure 2: Organization Culture Web



Source: Johnson et al. (2011, p. 176).

Knowledge sharing

Since learning is constantly arranged in a specific setting, culture and societies inside this setting will influence the way information is made, shared and utilized (Samova et al., 2015). In a knowledge sharing system, it is vital that knowledge partaking must occur (Butt et al., 2018). Knowledge resources and information sharing are indispensable for the achievement of successful cooperative systems, especially in a production network setting, where knowledge sharing turns into a key factor in achieving set targets and performance (Um & Kim, 2018).

When outlining viable information systems (e.g. training groups) it is essential to think about the following: First, to begin within the knowledge sharing context both “trust” and “interpersonal organizational ties”, from the perspective of a “social capital” theory point of view are the most recurrent themes (Gemünden et al., 2018). Second, “trust” is critical in upgrading knowledge sharing, “power” on the other hand improves it in a circuitously way with a flaccid approach (Cai et al., 2013). Third, the process of knowledge sharing will hamper joint-venture organizations across the borders if there is dissimilarity identified with set growth criteria because of “cultural contrasts” and “premeditated misalignment” (Solli et al., 2015).

A method for sharing knowledge in an organization is by managing and utilizing training groups, which can be characterized as “gatherings of individuals who share their anxiousness, an arrangement of issues, or an enthusiasm about a theme, and who deepen their knowledge and expertise in this area by interacting with each other on a constant basis” (Serrat, 2017). The individuals involved in these training groups practice not only clear insight, but also create trust and understanding, which allows its members to share their achievements and slip-ups as well as half-ideas (Swales, 2013). Such opportunities and chances given to individuals in an organization enables them to learn and share knowledge and these methods allow each individual to grow naturally. They are bound by the feeling of collective identity and a collective approach (Wenger et al., 2002).

Theoretical model and hypothesis

Trust

One of the most important and essential features of organizational culture that is the trust between colleagues including interpersonal trust, and it is believed that trust has a strapping influence over knowledge sharing. For trust to be set up between the sender and the recipient of information, a relationship must be constructed (Al Saifi et al., 2016). Therefore we hypothesize that.

H1: Trust among co-workers has a positive influence on knowledge transfer

Information system

The term information system referred to a specific pact of information, individuals, and procedures that associate to help everyday tasks and enhance critical thinking in organizations (Leifer& Mills, 1996). Various aspects have changed the way organizations view knowledge and partake in knowledge sharing, but conceivably the most essential factor is the use of new information technology to get the required and up to date knowledge (Gertler, 2003). Although technology is an enabler and regarded as an important tool in knowledge man-

agement, it is still considered as the most valuable and effective means of confining, accumulating, converting and propagating the required information.

Therefore we hypothesize that.

H2: The use of information technology has a positive influence on knowledge transfer in an organization.

Communication

Communication here alludes to individuals association and interaction in the course of oral discussions as well as the utilization of non-verbal communication while corresponding with each other. Human collaboration is improved by the presence of long-range informal communication in the working environment. This type of correspondence is important to empower the process of knowledge transfer (Garrison, 2011). Therefore we hypothesize that.

H3: Communication through (face-to-face) interaction between workers has a positive influence on knowledge transfer in an organization

Reward framework

As indicated by Allen (2016), workers require solid help with a specific end goal to share information. When crafting and implementing a reward system, managers must keep in mind the significance of sharing and collaboration. The concept is to commence a practice in an organized system in which information sharing and horizontal communication are supported as well as encouraged and rewarded. Such a reward framework must be founded and given on overall group performance instead of individual performance execution (Kenyon & Sen, 2015). Based on the above arguments, a hypothesis was proposed.

H4: The alignment of a reward system with sharing knowledge has a positive influence on knowledge transfer in an organization

Organization structure

These days, a good number of managers understand the impediments to the formation of bureaucratic structures in abating the procedures and raising restrictions on streams of information. Moreover, such systems regularly devour huge amount of time with the goal for knowledge to riddle through each level (Montgomery & Laegeler, 2017).

H5: Formation of a specific organization structure (such as individual participation in the decision-making process, easiness of information flow,) has a positive influence on knowledge transfer in an organization.

Management and Leadership

Being an executive or manager of an organization fulfilling leadership qualities can facilitate or impede knowledge sharing (Boin et al., 2016). Yang (2007, pp. 532; 536) proposes four administration styles that impact information and knowledge sharing practices: facilitator, mentor or guide, innovator or trend-setter and monitor or observer.

A transformational leadership is that kind of leadership which reinforces knowledge sharing in a positive and indirect way. Transformational pioneers em-

powering and encouraging assimilation of different groups results in promoting trust, cooperation and positive connections among colleagues. Transformational pioneers create consciousness and awareness of the group mission and look beyond for individual self-interests for the assistance and advantage of all group members. Transformational pioneers likewise stir their followers and invigorate the workers (Kang & Snell, 2009). Defining and setting objectives right on time in the project could have some positive effect on knowledge sharing but, as yet, no convincing confirmation has been found. Therefore we hypothesize that.

H6: Leadership plays a critical role in an organization and leadership characteristics have a positive influence on knowledge transfer in an organization.

Method & Procedure

In order to examine the hypotheses of this study, across-sectional survey was carried out and a questionnaire was administered in Chinese companies engaged in CPEC projects. In the beginning, 35 companies were identified and selected, which were located in different areas of Pakistan. Letters and emails were sent to describe the purpose of the research and its impact on current projects. During the research, reassurance was given to the selected companies HR managers about company privacy.

As a result, 27 companies confirmed their willingness to participate in the survey. To synchronize and direct data collection inside the organization, a request was made to each company to assign an authorized person. The authorized person in each company disseminated the questionnaire to the project managers, project team members, and company managers in separate envelopes. The survey method technique was picked and executed in light of the way that it would formulate and increment the generalizability of the research findings and offer outgoing wellness of quantitative analysis and theory testing (Sekaran & Bougie, 2016).

Candidates' profile

The individuals chosen for this study were project managers, project team members, and managers. We aimed to interview people from these three special positions in order to get a better perspective of the situation and have diverse viewpoints, as suggested by Alvesson (2003).

Project managers: these are those Individuals that are at present in the task administration position and accordingly have control of courses of events, assets, and work dispersion. They are important as they have the experience of driving all their colleagues and have an encompassing perspective of the overall circumstances (Greasley et al., 2005).

Project team members: Any individual candidly associated with the advancement of the task, for instance: Business market analyst, Quality Controllers, Designers. They are significant as they are the people playing out the real venture and face difficulties when performing knowledge sharing procedures. Their perspectives may shift from those of the task administrators and supervisors (Nonaka, 2000).

Managers: Any individual with the status of supervisor of a division or undertakings of a production unit. They are significant as they give an alternate point

of view as they oversee a substantial number of individuals and can tell from their viewpoint the fundamental difficulties their groups encounter in the knowledge sharing and transferring procedures (Berman, 2015).

A 5-point Likert scale was used, varying from (SD) Strongly Disagree to (SA) Strongly Agree to gauge the responses. A brief abstract was also presented to respondents about the study purpose at the start of the questionnaire to build up their prelude understanding. The chosen respondents were made aware that the required data gathering would only be used for learning purposes, which is why they were not requested to cite their given name and contact information. The demographic information of the respondents in terms of percentage included the respondent's gender, designation, qualifications, age and his/her working experience in current organizations, as are given in Table 1.

Table 1

Demographic

Category	Classification	Frequency	Percentage
Gender	Male	75	78,9
	Female	20	21,1
Respondents Designation	Project Manger	38	40
	Project-Team Member	43	45,3
	Managers	12	12,6
	Others	2	2,1
Qualification	Diploma	16	16,8
	Bachelor	29	30,5
	Master	45	47,4
	PhD	5	5,3
Age	18–25 yrs	22	23,2
	26–35 yrs	32	33,7
	36–45 yrs	31	32,6
	46 Above	10	10,5
Work Experience	0–5 yrs	35	36,8
	6–10 yrs	38	40
	11–15 yrs	15	15,8
	16 Above	7	7,4
Number of Employees	0–500	31	32,6
	600–1000	36	37,9
	1000 Above	28	29,5

Sources: This study is the author own research. The instigator of this study uses questionnaire for data collection. The data was selected from 100 participants and all these participants belong to 27 different companies engaged in CPEC project.

The data was collected from 95 respondents. There were 75 males (78.9% of the total study group) and 20 females (21.1% of the total study group). Regarding the respondents' designation and keeping in view the interview profile, there were 38(40.0%) project managers, 43(45.3%) project team members and 12(12.6%) managers. Likewise, the respondents were divided into different age groups, qualification and work experience.

Data analysis and results

Survey measures

To boost the generalizability of the study findings and broaden the capabilities of quantitative analysis and hypothesis testing we adopted the survey method. In order to make sure that recommended improvements would be collected in the survey questionnaire, fifteen sample questionnaires were disseminated to a group with the similar distinctiveness of the target sample. Furthermore, the survey questionnaire was checked and tested by three experts in the field of research who belong to the University of Science and Technology of China and four managers of selected organizations also reviewed the items of the survey questionnaire.

Consequently, a slight alteration was made in the wording of the items. Later, its reliability was tested which was 0.515 which is considered a good reliability statistic (Ruggeri et al., 2000). The stratified sampling method was used to select 100 participants from twenty-seven companies engaged in CPEC projects. Only 97 respondents returned the questionnaires, out of which two questionnaires were incomplete, so the final sample for this study is 95 questionnaires.

Table 2

Analysis of Common Method Bias. Harman's Single Factor Approach

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.236	29.132	29.132	12.236	29.132	29.132
3	3.838	9.138	53.970			
4	2.894	6.889	60.860			
5	2.434	5.796	66.656			
6	1.961	4.668	71.324			
7	1.823	4.340	75.663			
8	0.992	2.363	78.026			
9	0.843	2.008	80.033			
10	0.692	1.647	81.680			

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
11	0.652	1.551	83.232			
12	0.605	1.439	84.671			
13	0.544	1.296	85.967			
14	0.494	1.177	87.144			
15	0.462	1.100	88.244			
16	0.438	1.043	89.287			
17	0.411	0.979	90.266			
18	0.363	0.865	91.131			
19	0.341	0.812	91.943			
20	0.327	0.779	92.721			
21	0.279	0.665	93.386			
22	0.254	0.605	93.991			
23	0.244	0.582	94.573			
24	0.228	0.542	95.114			
25	0.214	0.509	95.624			
26	0.210	0.500	96.124			
27	0.205	0.489	96.613			
28	0.173	0.412	97.025			
29	0.167	0.398	97.423			
30	0.146	0.349	97.771			
31	0.143	0.341	98.112			
32	0.123	0.293	98.405			
33	0.117	0.278	98.683			
34	0.099	0.235	98.918			
35	0.084	0.201	99.119			
36	0.081	0.193	99.312			
37	0.070	0.167	99.479			
38	0.060	0.143	99.622			
39	0.056	0.133	99.755			
40	0.040	0.096	99.851			
41	0.037	0.087	99.938			
42	0.026	0.062	100.000			

Extraction Method: Principal Component Analysis.

The information, facts and other data for dependent variables and other variables in this study were selected from different sources, which is an apparent way to manage common method bias (Chang, Van Witteloostuijn & Eden, 2010). In order to test the data and further authenticate that common method bias does not intimidate the validity of this study. We applied Harman's single factor technique; the results (Table 2) indicate that 16 constructs have eigenvalues larger than 1 and account for the 89.287% of the variation. The first construct clarifies 29.132% of the total variance. The results suggested that common method bias does not critically affect the results.

Measurement model

Table 3

Factor Loading

	Commu- nication	Information Technology	Knowledge Transfer	Management Leadership	Organization Structure	Reward	Trust
COM1	0.889	0.090	0.373	0.185	0.151	0.134	0.286
COM2	0.882	0.112	0.274	0.118	0.029	0.128	0.313
COM3	0.793	0.065	0.238	0.137	0.118	0.011	0.347
COM4	0.793	0.042	0.105	0.135	-0.036	0.031	0.314
COM5	0.732	-0.083	0.185	0.025	-0.040	0.007	0.418
KS1	0.280	0.288	0.854	0.386	0.316	0.479	0.246
KS2	0.147	0.469	0.833	0.617	0.435	0.473	0.229
KS3	0.395	0.434	0.912	0.507	0.425	0.540	0.276
KS4	0.265	0.383	0.851	0.311	0.346	0.472	0.283
KS5	0.272	0.251	0.830	0.311	0.368	0.436	0.363
KS6	0.300	0.333	0.870	0.319	0.373	0.388	0.263
RWD1	0.026	0.226	0.400	0.315	0.402	0.778	0.157
RWD2	0.111	0.291	0.467	0.343	0.381	0.904	0.145
RWD3	0.122	0.295	0.533	0.359	0.397	0.897	0.188
RWD4	0.072	0.328	0.566	0.365	0.343	0.891	0.142
RWD5	0.065	0.232	0.397	0.356	0.351	0.846	0.129
RWD6	0.076	0.237	0.407	0.303	0.385	0.844	0.161
IT1	0.081	0.842	0.407	0.445	0.235	0.299	0.071
IT2	0.118	0.844	0.426	0.560	0.241	0.345	0.086
IT3	0.027	0.869	0.322	0.434	0.246	0.257	0.001
IT4	0.013	0.900	0.337	0.514	0.226	0.267	0.006
IT5	0.067	0.778	0.318	0.369	0.228	0.177	0.030
IT6	0.073	0.747	0.312	0.393	0.182	0.162	0.063
IT7	0.004	0.799	0.313	0.368	0.281	0.287	0.008

	Communi- cation	Information Technology	Knowledge Transfer	Management Leadership	Organization Structure	Reward	Trust
TR1	0.392	0.058	0.298	0.017	0.211	0.182	0.939
TR2	0.407	0.041	0.282	0.032	0.168	0.184	0.935
TR3	0.317	0.111	0.378	0.072	0.173	0.216	0.897
TR4	0.365	0.036	0.260	0.038	0.083	0.140	0.901
TR5	0.277	-0.050	0.209	-0.060	0.181	0.115	0.910
TR6	0.367	0.063	0.335	0.015	0.178	0.166	0.932
TR7	0.385	-0.049	0.175	-0.014	0.142	0.070	0.854
ml1	0.155	0.433	0.412	0.838	0.181	0.286	0.024
ml2	0.132	0.421	0.364	0.837	0.182	0.349	0.060
ml3	0.158	0.439	0.437	0.901	0.178	0.341	0.025
ml4	0.083	0.530	0.391	0.810	0.239	0.350	0.054
ml5	0.128	0.461	0.452	0.840	0.160	0.352	0.043
os1	0.000	0.302	0.436	0.266	0.870	0.397	0.129
os2	0.084	0.266	0.405	0.233	0.924	0.357	0.164
os3	0.110	0.245	0.376	0.171	0.927	0.362	0.205
os4	0.095	0.227	0.410	0.153	0.927	0.430	0.176
os5	0.095	0.237	0.377	0.169	0.888	0.422	0.149

We carry out confirmatory factor analysis (CFA) to examine measurement validity and reliability. Based on the literature review the study has measured 7 factors and each of them was operationalized into a number of indicators. The results (Table 3) specify that all of the items are screening loadings within the satisfactory level of 0.70; therefore there was no need to eliminate any item for the purpose of consequent analysis.

Table 4

Results of Confirmatory Factor Analysis

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Trust	0.966	0.971	0.828
Information Technology	0.922	0.938	0.684
Communication	0.883	0.911	0.672
Reward	0.930	0.945	0.742
Organization Structure	0.946	0.959	0.824
Management Leadership	0.900	0.926	0.715
Knowledge Transfer	0.929	0.944	0.737

The results of confirmatory factor analysis (Table 4) exhibit the values of Cronbach's Alpha, composite reliability (CR) and the value of average variance extracted (AVE).

The values for Cronbach alpha and composite reliability vary from 0.883–0.966 and 0.911–0.971, respectively.

In case of Cronbach alpha and composite reliability, the values should be greater than 0.60 (Sijtsma, 2009), and the desired values of average variance extracted (AVE) ought to be bigger than 0.50 (Hair, Ringle, & Sarstedt, 2011). Hence, all the above-mentioned values persuade the satisfactory level criteria. All the above-mentioned values are ahead of the acceptable level.

Table 5

Intercorrelation Matrix

	Trust	IT	Com	Reward	Org-Structure	Mgt-Leadership	Knowledge Transfer
Trust	0.910						
IT	0.046	0.827					
Com	0.039	0.070	0.820				
Reward	0.179	0.316	0.094	0.861			
Org-Structure	0.081	0.283	0.083	0.434	0.908		
Leadership	0.024	0.540	0.156	0.396	0.221	0.846	
Knowledge Transfer	0.320	0.427	0.322	0.545	0.443	0.489	0.859

Note: Values in diagonal rows = Square roots of Average Variance Extracted.

Finally, the values of all constructs and the square roots were calculated in order to test the discriminant validity. The result indicates that the square root values are higher than the correlation between constructs, which gratify the discriminant validity of the measurement model. AVE values which are greater than 0.5 denote good quality convergent validity for the questionnaire (Lai & Chen, 2011).

AVE measures are also used to articulate discriminant validity that is validating when a measure does not correlate vastly with a different measure from which it needs to be required to differ. Table 5 shows that the AVE square root value is greater than the correlation amongst all constructs, which signify good convergent validity.

The value of R-square indicates that the total variation in the dependent variable that has been explained by the independent variables is equal to 51.5%. Moreover, the value of t-statistics also indicates that the model is good-fit. The p-values of all the variables also confirm significant positive relation of the dependent variable except information technology (i.e., knowledge transfer) with the independent variables (i.e., trust, communication, information technology, reward, organization structure and management leadership).

Table 6

PLS-SEM results

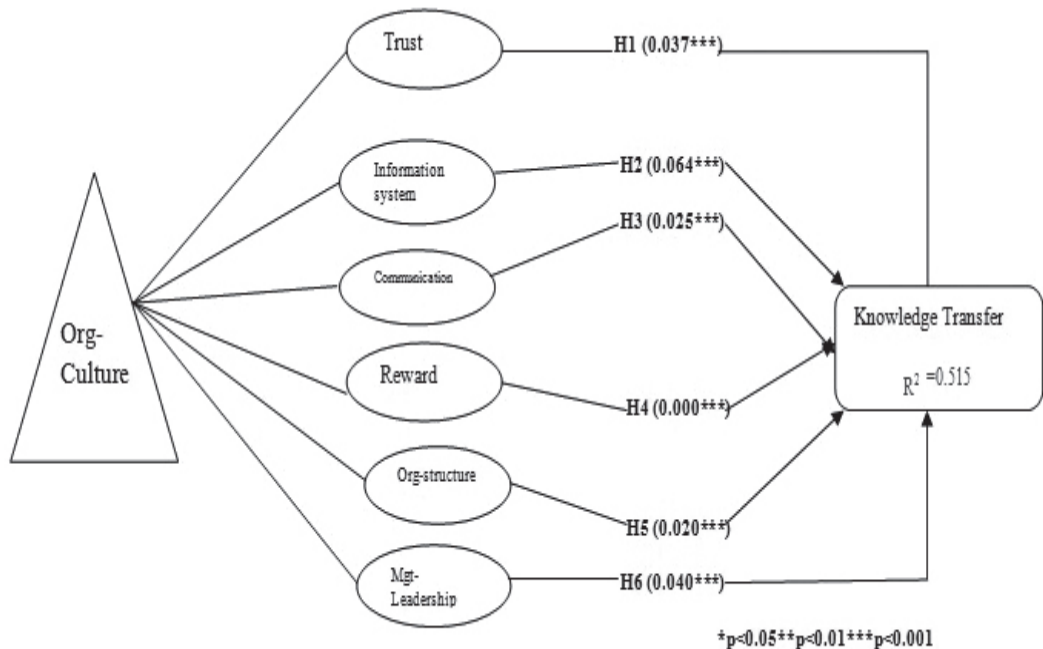
	B-coefficients B	T Statistics	P Values
Trust -> Knowledge Transfer	0.151	2.086	0.037
Information Technology -> Knowledge Transfer	0.141	1.854	0.064
Communication -> Knowledge Transfer	0.185	2.246	0.025
Reward -> Knowledge Transfer	0.290	3.886	0.000
Organization Structure -> Knowledge Transfer	0.185	2.325	0.020
Management Leadership -> Knowledge Transfer	0.236	2.055	0.040

Structural model

The PLS-SEM illustrates the result of structure model shown in Figure 3. The conjecture association of Trust which is an important aspect of organization culture shows a significant positive relation with knowledge transfer, which supports H1.

The results also specify that other aspects of organizational culture such as communication (H3), reward system (H4), organizational culture (H5) and management leadership (H6) show a positive relationship with knowledge transfer. But on the other hand, information system (H2) does not show a positive relationship with knowledge transfer.

Figure 3: Results of PLS analysis



Discussion and conclusion

H1: Trust among co-workers has a positive influence on knowledge transfer.

From the above findings, it is concluded that independent variable trust has a positive and significant influence on dependent variables i.e. knowledge transfer. The derived value 0.037 designates that trust is positive and has a significant influence on knowledge transfer ($P < 0.05$). Therefore H1 is supported.

Trust is the most regularly expressed determinant in regards to knowledge transfer. In an organization, the process of knowledge transfer can be improved by executing trust among colleagues. Trust among associates helps to encourage the knowledge transfer procedure; this is bolstered by Ismail Al-Alawi et al. (2007, p. 39) and Cai et al. (2013, p. 2072) who contend that trust between associates is a basic achievement factor with respect to knowledge transfer, and once installed in the organization, economic advancement can be accomplished.

In our exploration, we found that individuals need to trust in their associates, supervisors, and workers. However, for a multinational venture group to participate in great knowledge transfer sharing there are other vital things such as dialect abilities, beat social hindrances and appropriate correspondence channels. Notwithstanding this area, we can see that trust has great connections to empower the information sharing procedure. This runs in accordance with what Roberts (2000) has revealed in her study, i.e. that trust is one of the elements in virtual teams which knowledge transfer and knowledge sharing depend on.

H2: The use of information technology has a positive influence on knowledge transfer in an organization.

The use of information technology is an independent variable in our study and does not show a positive relationship with knowledge transfer. The value of information technology which is 0.064 designates that information technology has no significant influence on knowledge transfer ($P > 0.05$). Therefore H2 is not supported.

The use of technology to share data among employees is customary in multinational teams (Townsend et al., 1998). On the off chance, if there is an issue, an employee can get online help and in addition to an answer or they can post their concerns on the association intranet. Individuals share their issues and experiences and have access to association intranet systems and databases (Hair et al., 2015). This can be related to Child (2015) recommending that intranets in multinational associations allow their workers to research and get more access to online definitive information and support particular learning through the different technological modes, for instance, PC generation and sharp programming coaches.

Enhancement in the field of IT has without a doubt improved global contact at all levels of the multinational for employees and empowers quicker exchange of data and classified learning. The amount of information that dwells in some companies' centralized knowledge banks still can be overwhelming (Aswathappa, 2005). Further, as Cetina (2009) identifies, cultural characteristic surrounding IT is imperative but there is a risk that the centralization of knowledge

and information codified into the company language will disengage those who do not have essential language competence.

H3: Communication through (face-to-face) interaction between workers has a positive influence on knowledge transfer in an organization.

The third independent variable in our study is that communication through (face-to-face) interaction between employees creates positive and significant relationships with a dependent variable that is knowledge transfer. The results show that communication has the value of 0.025 i.e. ($P < 0.05$). Hence H3 is supported.

An organization culture based on social fabrics is more likely to have individuals willing to participate in knowledge sharing. Employees' face-to-face interaction still has a tendency to be seen as the most intense medium of learning exchange, in spite of technological advances in present-day communications (Samovar et al., 2015). In an investigation (Schneider & De Meyer, 1991) of 14 multinationals found to enhance communication between inter-unit correspondences, socialization was the most critical: multinationals persist to lay great prominence on the need to assemble staff gathering in set-ups such as meetings, work-out sessions and so forth as a reason for knowledge sharing. Participation in such social events is, normally, language dependent.

H4: The alignment of a reward system with sharing knowledge has a positive influence on knowledge transfer in an organization.

From the hypotheses testing, we concluded that the (IV) i.e. reward system has the positive and significant relationship between (DV) i.e. knowledge transfer. The derived value 0.000 designates rewards and recognition is positively and significantly associated with knowledge ($P < 0.05$). Therefore, H4 is supported.

Normally, representatives of any association have a tendency to see rewards as measures for their actions and practices favored and valued by top administration (Greenwald, Nosek & Banaji, 2003). Knowledge sharing can be an internal trademark correlated with one's distinctiveness. Nonetheless, it is not enough to rely on the good intentions of employees that they will spread their insight and knowledge without fortifying such reward practices. As the matter of fact, unrewarded practices and lack of appreciation more often ends those behaviors which are important for knowledge sharing (Alkaersig et al., 2015). In addition, with the end goal for a reward to be fruitful in rousing staff to share their knowledge, these prizes must be appropriately intended to fit representatives' needs and recognition. Clearly, workers' impressions of prizes differ as per their experiences, past encounters, and targets. Therefore, the best arrangement would modify the reward framework to fit workers' needs and suit their goals (Khan, 2015).

H5: Formation of specific organization structure such as (individual participation in decision-making process, easiness of information flow) has a positive influence on knowledge transfer in an organization.

From the above findings it is concluded that the derived value of organization structure (0.020), which is an independent variable, has a positive and signifi-

cant influence on the dependent variable that is knowledge transfer: indicate that ($P < 0.01$). So, therefore, H5 is supported.

Organizational structure alludes to the way in which peoples jobs and the tasks they perform in an organization are arranged in such way that the personal objective of employees as well as the goals of the organization can be accomplished. A minor part of knowledge sharing is played by the chain of command where communications among colleagues and supervisors could be possibly influenced (Harper, 2015). Hierarchies typically imitate power control structures which might influence the workflows in an organization (Beech & MacIntosh, 2012, p. 82).

Infringement of the hierarchies in the organization helps to facilitate knowledge transfer. Those organizations that retain hierarchical levels and silos will not encourage knowledge flow. Knowledge in such organizations frequently becomes sticky, which means it is inherent in one area or silo and cannot be straightforwardly moved to other levels of the organization (Phaladi, 2011).

H6: Leadership plays a critical role in an organization and leadership characteristics have a positive influence on knowledge transfer in an organization.

The last independent variable in our study is leadership style and from our hypothesis testing above it is concluded that leadership style has a positive and significant influence on the dependent variable that is knowledge transfer. The value of leadership style according to the result is (0.040) indicating that ($P < 0.01$). Hence H6 is also supported.

The part of the administrator as a pioneer can help or hamper information sharing (Bharadwaj, 2000). The leader as facilitator was found to have a positive direct effect in knowledge sharing to whichever extent that he arranges and helps his group to get to the wellsprings of information and utilizes his energy to assist the knowledge and information exchange. These are viable administration practices that not only help in improving employees' empowerment but can also support the presence of a transformational leadership and open culture where knowledge is remunerated and shared freely inside the hierarchical setting. These administrative practices may incorporate employment development and enlargement also (Kwinda, 2012). This argument supports Yang's (2007, p. 537) preface that facilitator leadership is helpful for knowledge sharing.

A team leader or administrator having transformational characteristics promotes team assimilation which in turn spawns trust, group effort and constructive relationships amongst team members. Transformational pioneers produce familiarity with the mission of the group members and look beyond self-interests for the advantage of all of their colleagues.

Conclusion

After analyzing the results of the study, more than a few findings were obtained. Some of the findings are precise to organizations who work with multinational project teams. According to our findings, Chinese project teams will come across some challenges in those countries which are part of One Belt-One

Road (OBOR) because of differences in language, culture, and systems. Therefore we deemed it necessary to explore the organizational culture characteristics by selecting Chinese multinational companies involved in the China Pakistan Economic Corridor (CPEC), because of the huge difference in culture and language between the two countries.

According to our investigation, trust in colleagues was confirmed to assist the knowledge transfer process and the lack of it will hinder the information flow. In this study, trust was found to be directly associated with knowledge transfer. It does not matter if people are working side by side or in a different locality around the world, trust is a key and important determinant in the process of knowledge transfer. Besides that, collaboration was found to improve knowledge transfer and is considered one of the most important factors for group work and teams. Positive interaction among team members is also key for knowledge sharing in multinational teams.

In this study, other determinants that were found to have a direct influence on knowledge transfer include communication, reward system, organization structure and management leadership, but information systems was found to be insignificant. One of the reasons for this could be culture, according to Bhagat et al. (2002). Countries such as China, Brazil and Russia have collectivistic cultures. The member of collectivistic cultures looks for an appropriate pattern of information and tends to ignore information in writing. A refinement amongst low-and high-setting styles of correspondence additionally strengthens this case. In high-setting societies, for example China, Brazil, and Russia, individuals have a tendency to depend more on the setting of non-verbal actions and activities and the environmental setting to pass on that information, and therefore they have a tendency to incline toward correspondence such as up close and personal correspondence or telephone calls. For individuals from low setting societies, for example the USA, more accentuation is put on the composed word, and in such an environment, messages or online dialogue sheets will be more accepted. For some Chinese companies working in remote areas of Pakistan, language barriers and lack of advanced technological resources can also be one of the reasons, because if the workers want to share or ask anything using the organization's intranet they might not get the exact answer because of the language barrier or less access to the organization information system.

Managerial implications

The discoveries from this study could be useful for supervisors, managers and task directors working with venture groups who can be assumed to play their part in a multinational environment. Making opportunities to create trust among colleagues, positive connections and a domain portrayed by coordinated efforts, are key factors that managers should mull over when attempting to encourage knowledge transfer practices. Events such as team exercises where representatives have the opportunity to connect with each other outside the workplace are genuine illustrations that have been demonstrated to grow into highlights of the organizational culture which later convert into knowledge sharing practices.

Leadership styles, for example, transformational among directors have likewise appeared to help coordinate colleagues, and make relationships based on trust among associates. Hence, it is imperative for directors to look past their self-interests for the advantage of all their colleagues, and attempt to motivate and invigorate representatives.

Additionally, a manager has to recognize the disparity not only in the language and culture but in the way people correspond with each other. People from some countries are more receptive and quieter, others are more undeviating and straightforward and some are friendlier and impudent. Knowing how to talk and to whom is important when building trusting interaction with them.

Conflict of Interest

The authors affirmed that there are no possible conflicts of interest with respect to the research, authorship, and/or publication of this article.

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REFERENCES

1. Achrol, R.S. (1991). Evolution of the marketing organization: new forms for turbulent environments. *The Journal of Marketing*, pp. 77–93.
2. Ahmad, M.S., Asmi, F., Ali, M., Rahman, M.M. & Abbas, S.M. (2017). China-Pakistan Economic Corridor: In the context of String of Pearls Strategy. *International Journal of Business and Social Research*, vol. 7, no 8, pp. 26–42.
3. Al Saifi, S.A., Dillon, S. & McQueen, R. (2016). The relationship between face to face social networks and knowledge sharing: an exploratory study of manufacturing firms. *Journal of knowledge management*, vol. 20, no 2, pp. 308–326.
4. Alkaersig, L., Beukal, K., Reichstein, T. & Beukel, K. (2015). *Intellectual property rights management: Rookies, dealers and strategists*. Springer.

5. Allen, M.W. (2016). *Michael Allen's guide to e-learning: Building interactive, fun, and effective learning programs for any company*. John Wiley & Sons.
6. Alvesson, M. (2003). Beyond neopositivists, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy of Management Review*, vol. 28, no 1, pp. 13–33.
7. Aswathappa, K. (2005). *Human resource and personnel management*. Tata McGraw-Hill Education.
8. Berman, L. (2015). *The Office of Management and Budget and the presidency, 1921–1979*. Princeton University Press.
9. Bhagat, R.S., Kedia, B.L., Harveston, P.D. & Triandis, H.C. (2002). Cultural variations in the cross-border transfer of organizational knowledge: An integrative framework. *Academy of Management Review*, vol. 27, no 2, pp. 204–221.
10. Bharadwaj, A.S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS quarterly*, pp. 169–196. Boin, A., Stern, E., & Sundelius, B. (2016). *The politics of crisis management: Public leadership under pressure*. Cambridge University Press.
11. Brown, W.A. & Iverson, J.O. (2004). Exploring strategy and board structure in nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, vol. 33, no 3, pp. 377–400.
12. Butt, M.N., Antia, K.D., Murtha, B.R. & Kashyap, V. (2018). Clustering, Knowledge Sharing, and Intra-brand Competition: A Multiyear Analysis of an Evolving Franchise System. *Journal of Marketing*, vol. 82, no 1, pp. 74–92.
13. Cai, S., Goh, M., de Souza, R. & Li, G. (2013). Knowledge sharing in collaborative supply chains: twin effects of trust and power. *International Journal of Production Research*, vol. 51, no 7, pp. 2060–2076.
14. Cetina, K.K. (2009). *Epistemic cultures: How the sciences make knowledge*. Harvard University Press.
15. Chang, S.-J., Van Witteloostuijn, A. & Eden, L. (2010). From the editors: Common method variance in international business research. Springer.
16. Child, J. (2015). *Organization: contemporary principles and practice*. John Wiley & Sons.
17. Erik Karlsen, J. & Karlsen, H. (2007). Expert groups as production units for shared knowledge in energy foresights. *Foresight*, vol. 9, no 1, pp. 37–49.
18. Ferreira, A. & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management accounting research*, vol. 20, no 4, pp. 263–282.
19. Frels, R.K. & Onwuegbuzie, A.J. (2013). Administering quantitative instruments with qualitative interviews: A mixed research approach. *Journal of Counseling & Development*, vol. 91, no 2, pp. 184–194.
20. Garrison, D.R. (2011). *E-learning in the 21st century: A framework for research and practice*. Taylor & Francis.
21. Gemünden, H.G., Lehner, P. & Kock, A. (2018). The project-oriented organization and its contribution to innovation. *International Journal of Project Management*, vol. 36, no 1, pp. 147–160.

22. Gertler, M.S. (2003). Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there). *Journal of economic geography*, vol. 3, no 1, pp. 75–99.
23. Gold, A.H., Malhotra, A. & Segars, A.H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, vol. 18, no 1, pp. 185–214.
24. Goldstein, A. (2007). *Multinational companies from emerging economies: composition, conceptualization and direction in the global economy*. Springer.
25. Greasley, K., Bryman, A., Dainty, A., Price, A., Soetanto, R. & King, N. (2005). Employee perceptions of empowerment. *Employee relations*, vol. 27, no 4, pp. 354–368.
26. Greenwald, A.G., Nosek, B.A. & Banaji, M.R. (2003). Understanding and using the implicit association test: I. An improved scoring algorithm. *Journal of personality and social psychology*, vol. 85, no 2, p. 197.
27. Hair, J.F., Ringle, C.M. & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, vol. 19, no 2, pp. 139–152.
28. Hair Jr, J.F., Wolfinbarger, M., Money, A.H., Samouel, P. & Page, M.J. (2015). *Essentials of business research methods*. Routledge.
29. Harper, C. (2015). *Organizations: Structures, processes and outcomes*. Routledge.
30. Hassan, S.T. (2018). *A Logistics Perspective on China Pakistan Economic Corridor*. CAPITAL UNIVERSITY.
31. Hilpinen, R. (1970). Knowing that one knows and the classical definition of knowledge. *Synthese*, vol. 21, no 2, pp. 109–132.
32. Hoegl, M., & Schulze, A. (2005). How to Support Knowledge Creation in New Product Development: An Investigation of Knowledge Management Methods. *European management journal*, vol. 23, no 3, pp. 263–273.
33. Hofstede, G., Hofstede, G. & Minkov, M. (2010). *Kultury Organizacyjnej*. McGraw-Hill: New York, NY, USA.
34. Ismail Al-Alawi, A., Yousif Al-Marzooqi, N. & Fraidoon Mohammed, Y. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of knowledge management*, vol. 11, no 2, pp. 22–42.
35. Jablonka, E. & Lamb, M.J. (2007). Précis of evolution in four dimensions. *Behavioral and Brain Sciences*, vol. 30, no 4, pp. 353–365.
36. Jinchen, T. (2016). One Belt and One Road: Connecting China and the world. *Global Infrastructure Initiative website*.
37. Johnson, G., Whittington, R. & Scholes, K. (2011). *Exploring Strategy, Essex*. Prentice Hall.
38. Kang, S. C. & Snell, S. A. (2009). Intellectual capital architectures and ambidextrous learning: a framework for human resource management. *Journal of management studies*, vol. 46, no 1, pp. 65–92.
39. Kenyon, G.N. & Sen, K.C. (2015). *Implementing Organizational Change. The Perception of Quality* (pp. 81–99). Springer.
40. Khan, A.A. (2015). *Investigating the contribution of leadership “transformational and transactional” to innovation in technology sector in Ireland*. Dublin Business School.

41. Kwindu, A.A. (2012). *Exploring teachers' perceptions of distributed leadership practices in selected secondary schools within Gauteng Province*. University of Johannesburg.
42. Lai, W.-T., & Chen, C.-F. (2011). Behavioral intentions of public transit passengers. The roles of service quality, perceived value, satisfaction and involvement. *Transport Policy*, vol. 18, no 2, pp. 318–325.
43. Leifer, R. & Mills, P.K. (1996). An information processing approach for deciding upon control strategies and reducing control loss in emerging organizations. *Journal of Management*, vol. 22, no 1, pp. 113–137.
44. Montgomery, W.T. & Laegeler, S.L. (2017). *An analysis of the Army's formal bureaucracy and the impact on acquisition cycles*. Monterey, California: Naval Postgraduate School.
45. Mueller, J. (2015). Formal and informal practices of knowledge sharing between project teams and enacted cultural characteristics. *Project Management Journal*, vol. 46, no 1, pp. 53–68.
46. Nelson, H.G. & Stolterman, E. (2003). *The design way: Intentional change in an unpredictable world: Foundations and fundamentals of design competence*. Educational Technology.
47. Nonaka, I. (2000). A dynamic theory of organizational knowledge creation *Knowledge, groupware and the internet* (pp. 3–42). Elsevier.
48. Phaladi, M.P. (2011). *Knowledge transfer and retention: the case of a public water utility in South Africa*. Stellenbosch: University of Stellenbosch.
49. Polanyi, M. (1966). We can know more than we can tell. *The Tacit Dimension*.
50. Regner, P. & Zander, U. (2011). Knowledge and strategy creation in multinational companies. *Management International Review*, vol. 51, no 6, pp. 821–850.
51. Ritzinger, L. (2015). The China-Pakistan Economic Corridor *Regional Dynamics and China's Geopolitical Ambitions*. *The National Bureau of Asian Research*. *Strategic Asia*, 2015–16.
52. Ruggeri, M., Lasalvia, A., Dall'Agnola, R., Tansella, M., Van Wijngaarden, B., Knudsen, H. C., . . . Gaitte, L. (2000). Development, internal consistency and reliability of the Verona Service Satisfaction Scale-European Version: EPSILON Study 7. *The British Journal of Psychiatry*, vol. 177, no 39, pp. 41–48.
53. Samovar, L.A., McDaniel, E.R., Porter, R.E. & Roy, C.S. (2015). *Communication between cultures*: Nelson Education.
54. Schimmelfennig, F., Engert, S. & Knobel, H. (2006). *International socialization in Europe: European organizations, political conditionality and democratic change*: Springer.
55. Schneider, S.C. & De Meyer, A. (1991). Interpreting and responding to strategic issues: The impact of national culture. *Strategic management journal*, vol. 12, no 4, pp. 307–320.
56. Sekaran, U. & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
57. Serrat, O. (2017). *Knowledge solutions: Tools, methods, and approaches to drive organizational performance*. Springer.
58. Shahzad, M.A. (2017). *Master of Business Administration*.
59. Sijtsma, K. (2009). On the use, the misuse, and the very limited usefulness of Cronbach's alpha. *Psychometrika*, vol. 74, no 1, p. 107.

60. Solli-Sæther, H., Karlsen, J.T. & van Oorschot, K. (2015). Strategic and cultural misalignment: knowledge sharing barriers in project networks. *Project Management Journal*, vol. 46, no 3, pp. 49–60.
61. Staab, S., Studer, R., Schnurr, H.-P. & Sure, Y. (2001). Knowledge processes and ontologies. *IEEE Intelligent systems*, vol. 16, no 1, pp. 26–34.
62. Stehr, N. (2015). *Knowledge politics: Governing the consequences of science and technology*. Routledge.
63. Swales, J. M. (2013). *Other floors, other voices: A textography of a small university building*. Routledge.
64. Townsend, A.M., DeMarie, S.M. & Hendrickson, A.R. (1998). Virtual teams: Technology and the workplace of the future. *The Academy of Management Executive*, vol. 12, no 3, pp. 17–29.
65. Um, K.-H. & Kim, S.-M. (2018). Collaboration and opportunism as mediators of the relationship between NPD project uncertainty and NPD project performance. *International Journal of Project Management*.
66. Van Wijk, R., Jansen, J.J. & Lyles, M.A. (2008). Inter-and intra-organizational knowledge transfer: a meta-analytic review and assessment of its antecedents and consequences. *Journal of management studies*, vol. 45, no 4, pp. 830–853.
67. Wenger, E., McDermott, R.A. & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Harvard Business Press.
68. Wilson, E.O. (1999). *Consilience: The unity of knowledge* (Vol. 31). Vintage.
69. Yew Wong, K. (2005). Critical success factors for implementing knowledge management in small and medium enterprises. *Industrial management & Data systems*, vol. 105, no 3, pp. 261–279.