



## Impact of Social Media and Project Performance: The Mediating Role of Horizontal and Vertical Communication

By

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### Abstract

**Background:** Social networks have recently received a lot of interest. It consists of websites and other online tools that enable individuals and organizations to receive, create, and share content by connecting with others on topics of mutual interest. Employees' excessive usage of social media at work has also created several concerns about their project's performance.

**Method:** Data from 154 randomly selected questionnaires were obtained online from employees of Pakistani IT/Software Houses using a quantitative approach. The data were analyzed using multivariate technique called Smart PLS-3 rather than covariance-based structural equation modeling to evaluate the hypothesized correlations.

**Results:** According to the findings of this study, there is a direct association between personal and work-related social media usage on project performance. Vertical Communication also plays an important role in mediating the interaction between personal and work-related use of social media.

**Conclusion:** This study proposes a unique approach for determining if the use of social media affects project performance via horizontal and vertical communication. It will also help lawmakers and researchers in their efforts to manage social media use at work.

**Keywords:** Project Performance, Personal use of social media, Work-related use of social media, Horizontal Communication, Vertical Communication, PLS-SEM

### Introduction

Social media is a technology that was developed on a Web 2.0 technological basis to enable social and business communication. (Parveen et al., 2015).

Social media is used by both individuals and businesses to produce, share, and exchange information with their friends, family, colleagues, and consumers for social and commercial purposes. Organizations may utilize social media to connect effectively with their employees, customers, and other stakeholders to generate work purpose and collaboration (Naudé et al., 2014). As a result, efficient use of social media can improve people's competencies, as well as their work performance and organization (Nisar and Prabhakar, 2018). According to descriptive literature, social media are used for two types of communication i.e. vertical and horizontal communication (Wong et al., 2016). It's been discovered that "knowledge sharing among project team members is crucial for project performance" (Han and Hovav, 2013, p. 378), and that a team's ability to exchange information is critical to a project's success (Hsu et al., 2011, p. 1).

The term horizontal communication is defined as "The use of social media, where communication occurs among team members" (Davison et al., 2014; Bartels et al., 2010; Wong et al., 2016). Horizontal communication positively mediates the relationship between personal usage of social media and project performance. Employee communication refers to the exchange of information between two or more members of a team, and it can be verbal or non-verbal (e.g., email) channels (Adams, 2007; MesmerMagnus & DeChurch, 2009). Team communication criteria assess the degree to which team members consider the information received from team members was clear (e.g., Hoch & Kozlowski, 2014), the amount of time they spent interacting with other members of their team, the extent to which knowledge was shared (e.g., Kessel, Kratzer, & Schultz, 2012), or a combination of these factors. Because it provides crucial, task-relevant information to team members,

communication is also tied to team success. Employees can utilize social media to share resources and information, ask questions of coworkers and get news and feedback (Davison et al., 2014). These social exchange relationships result in a shared commitment to work ideals and objectives, resulting in improved employee job performance. (Wang et al., 2014; Banks et al., 2014). Horizontal communication provides for the flow of information and support amongst coworkers, which can help to establish horizontal partnerships. Employee job performance improves as a result of these social exchange interactions developing into a shared commitment to work beliefs and objectives (Banks et al., 2014).

The term “vertical communication” is defined as “The use of social media, where communication occurs between leaders and subordinates in the team” (Bartels et al., 2010; Davison et al., 2014; Wong et al., 2016). Vertical communication positively mediates the relationship between personal usage of social media and project performance. Previously studies identified a complex phenomenon in which the majority organizational performance problems and know how to fix them but are hesitant to communicate their ideas with management. There is an inherent class difference between supervisors and subordinates since they have different hierarchical positions. Subordinates do not have the same resources as supervisors (Anderson & Brion, 2014; Sturm & Antonakis, 2015). (Hsu et al., 2011, p. 1) Lee et al. (2015, p. 798) claimed that building healthy relationships between team members and leaders is crucial because they enable successful information transfer and collaborative issue resolution in real real-time without hesitation. Vertical communication can assist employees in understanding and identifying the company's values, decreasing uncertainty regarding the company's position (Postmes et al., 2001).

According to the virtuality theory, using social media for vertical communication can enable employees and organizations to develop a common mental model of team roles and effective workflow (Tijunaitis et al., 2019), Employees' motivation and sense of purpose can

be boosted by defining and sharing a common vision. Because of the use of social media, vertical communication between leaders and subordinates is now possible. Based on the highlighted research gaps, we believe that a study of the underlying mechanisms for the effects of two forms of social media usage on project performance, taking into account different communication behaviors such as horizontal and vertical communication, is required. This change seeks to fill in the logical evidence gap by finding the mediating relationship between horizontal and vertical communication on independent variables, such as personal and work-related social media usage on project performance. As previously stated, the organization's importance will increase in line with employees who share their interests, and lastly, turnover intentions and cyber loafing will decrease. (Usman, M., Javed, U., Shoukat, A., & Bashir, N. A. 2021). Employees in the same company should be able to communicate horizontally and vertically without restriction. Employees should therefore be required to communicate vertically with their managers in order their knowledge (Al-Busaidi, K. A., & Olfman, L. 2017). Employees with negative views regarding their jobs are less loyal and accountable to their bosses, and they are more likely to participate in off-task activities at work when they sense a lack of organizational justice or are bored (Chen, Chen, & Yang, 2008; Scheuermann & Langford, 1997; Stewart, 2000; Weatherbee, 2010).

The study's particular objectives are to determine the impact of personal and work related use of social media on project performance. To study the impact of personal and work related use of social media on horizontal communication, also the impact on vertical communication.

### **Methodology**

The research philosophy adopted in this study is Positivist because the researcher focuses on the facts through which the hypothesis are formulated and later verified. This study is a cross-sectional study where the variables have been measured in a shorter period i.e. single point in time. All variables of the study are

measured by a 5-point *Likert scale* (i.e., 1=Strongly Disagree; 5=Strongly Agree). This study is objective in focuses on the impact of two types of social media usage on project performance considering horizontal communication and vertical communication as a mediator in the context of Pakistan, specifically Rawalpindi and Islamabad. The research choice for conducting this study is Quantitative in nature. We had developed administered questionnaire, including items measuring the extent of Personal usage of social media, work-related usage of social media, Horizontal Communication, Vertical Communication and Project Performance is used to gather the data. For this study, the targeted industry was a project-based Organization. The specific focus was on IT/Software Houses based in Rawalpindi and Islamabad. For this study, the targeted industry was a Project-based Organization. The total sample size of my questionnaire was 200. 154 out of 200 responses were collected and recorded. The specific focus was on IT/Software Houses based in Rawalpindi and Islamabad i.e. The selected IT/Software Houses were mostly private inch as Ibex, QuellxCode, CodesOrbit, Techlets (Pvt) Ltd, Top data IT Solutions, Keydevs, Software Xperts, and Q Systems Computers,

The questionnaire adopted from five different sources i.e. the researcher selected IT/Software Houses, located in Rawalpindi and Islamabad with their complete information particularly their mailing addresses from their website on Google to approach them for having questionnaires to be filled. After approval, the questionnaires were circulated within project team members and the responses has been collected automatically on a google form. The targeted project team members of IT/Software Houses were on different designations. So, for this research, such as Back-end Developer, QA Team, QA Engineer, Tester, UI Designer, UX Designer has been selected as Employee. The population of this research includes all the project team members i.e. EMPLOYEES of Back-end Developer, QA Team, QA Engineer, Tester, UI

Designer, UX Designer has been selected of target IT/Software Houses that have been involved in the project-based organization under the department of Testing Team, System Engineering Department, Network Engineering, and in Project Management Department.

Structural Equation Modelling (SEM) indirect, controlled, interaction, and total effects (Hair et al., 2011). PLS-SEM modeling involves two models for analysis.

1. Structural model
2. Measurement model

The structural model depicts relationships between latent variables, whereas the measurement model depicts relationships between observable and latent variables. There are two sorts of measurement models: 1) reflective and 2) formative. In reflective models, arrows from latent variables are directed toward observable variables, but informative models, the converse is true (Hair Jr et al., 2016).

## Results

Data was acquired via random sampling from randomly selected software houses and IT companies. A total of 200 questionnaires were sent among team members working in Rawalpindi and Islamabad's selected software and IT companies/houses. A total of 152 completed and usable surveys were received, yielding a response rate of 76.00 percent. . The data collection contained some missing values and outliers (see Table 1).

**Note:** PUSM=Personal use of social media,  
WRSM=Work-related use of social media,

HC=Horizontal Communication, VC=Vertical Communication, PP=Project Performance

Items	N Valid	Missing Values
PP2	15 5	0
PP4	15 5	0
PP5	15 5	0
PUSM1	15 5	0
PUSM2	15 5	0
PUSM3	15 5	0
WRSM2	15 3	2
WRSM3	15 3	2
WRSM4	15 3	2
HC1	15 5	0
HC2	15 5	0
HC3	15 5	0
VC1	15 5	0
VC3	14 8	8
VC5	14 7	7

**Demographic Analysis:**

Three questions about the participant's gender, age, and experience made up the demographic section. The demographic features of the participants were revealed in the sample break down. Male respondents accounted for 110 (71.0%) and female respondents accounted for 44 (28.4%) of the 155 respondents, respectively. Males dominated the data (see Table 2).

	Gender		Total
	Male	Female	
Frequency	110	44	155
Percent	71.0	28.4	100
Valid Percent	71.0	28.4	100
Cumulative Percent	71.0	99.4	

**Table 2 Descriptive Statistics of Gender**

	Age			Total
	23-27	28-32	33-37	
Frequency	85	53	17	155
Percent	54.8	34.2	11.0	100
Valid Percent	54.8	34.2	11.0	100

54.8 percent of respondents were between the ages 23 and 27, 34.2 percent were between the ages of 28 and 32, and 34.2 percent of respondents were between the ages of 33 and 37, accounting for 11.0 percent of the total. These figures revealed that the majority of the respondents claimed to be between the ages of 23 and 27. (see Table 3).

**Table 3: Descriptive Statistics of Age**

According to the statistics, 61.3 percent of the respondents had 1-3 years of experience, while 16.8 percent had 2-4 years of experience. 21.3 percent of those surveyed said they had 3-5 years of experience (see Table 4).

	Age			Total
	1-3	2-4	3-5	
Frequency	95	26	33	155
Percent	61.3	16.8	21.3	100
Valid Percent	31.3	16.8	21.3	100
Cumulative Percent	54.8	89.0	100.0	

**Table 4: Descriptive Statistics of Experience**

The normality measures of skewness and kurtosis were calculated. Skewness refers to the degree to which data is symmetrical, and a skewness of less than -1 and greater than 1 shows that the data is severely skewed. Skewness between -1 and -0.5 or 0.5 and 1 shows significantly skewed data, skewness between -0.5 and 0.5 represents roughly symmetric data, and a value of 0 indicates total symmetry. Kurtosis, on the other hand, is a measure of the Centre peak's centers and height in relation to about l curve Data is considered normal in social science research if the skewness and kurtosis values are within the range of -3 to +3. (Kline 2005, Geary, 1947). The graph's orientation is shown by the positive and negative signs next to the values (Joanes & Gill, 1998). All of the study variables' skewness and kurtosis values

were within the range of -3 to +3 in this study (see table 5).

Multicollinearity raises coefficient standard errors, rendering some variables statistically unimportant. Multicollinearity is measured by tolerance and the Variance Inflation Factor (VIF), with VIF being the reciprocal of tolerance. If the VIF value is less than 3 and the tolerance is greater than 0.1, Multicollinearity is not a concern. The maximum level was determined by Hair et al. (1995) as a VIF value of 10, however, Ringle et al. (2015) defined it as "5". The Collinearity statistics in the current model indicated VIF of less than 3 for all items of the study variables, and tolerance values were greater than the stated threshold of 0.1 for all items, indicating that there were no difficulties with Multicollinearity in the data (see Table 7).

Descriptive Statistics			
Latent Variables	Indicator	Skewness	Kurtosis
PUSM	PUSM1	-1.367	2.525
	PUSM2	-1.165	1.411
	PUSM3	-1.057	1.644

<b>WRS M</b>	<b>WRSM 2</b>	-.669	-.025
	<b>WRSM 3</b>	-1.084	1.180
	<b>WRSM 4</b>	-.769	.506
<b>HC</b>	<b>HC1</b>	-1.145	1.624
	<b>HC2</b>	-.787	.089
	<b>HC3</b>	-.933	1.423
<b>VC</b>	<b>VC1</b>	-.789	.770
	<b>VC3</b>	-.841	.262
	<b>VC5</b>	-.780	2.347
<b>PP</b>	<b>PP2</b>	-1.242	1.501
	<b>PP4</b>	-1.246	1.663
	<b>PP5</b>	-.963	1.239

**Table 5: Skewness and Kurtosis**

**Note:** PUSM=Personal use of social media,  
WRSM=Work-related use of social media,  
HC=Horizontal Communication,  
VC=Vertical Communication,  
PP=Project Performance

Descriptive Statistics			
Const ructs	N	Mean	Std. Deviation
PUSM	154	3.926	.831
WRSM	151	3.724	.788
HC	155	3.677	.911
VC	155	3.648	.760
PP	154	3.797	.539

**Table 6: Descriptive Statistics**

**Note:** PUSM=Personal use of social media, WRSM=Work-related use of social media, HC=Horizontal Communication, VC=Vertical Communication, PP=Project Performance

HC1	2.025
HC2	1.042
HC3	2.404
P2	1.638
P4	1.883
P5	2.053
PUSM1	1.457
PUSM2	1.878
PUSM3	1.574
VC1	1.495
VC3	1.282
VC5	1.478
WRSM2	1.889
WRSM3	1.731
WRSM4	1.457

**Table 7: Collinearity Statistics**

The CFA results for this study demonstrated that all of the constructs' CR and AVE values were over the threshold score of 0.70 and 0.50, respectively, indicating that Convergent validity had been established and that

the indicators give a reliable measurement for the construct (see Table 8). Figures 3 and 4 show the CR and AVE visually, respectively.

	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted(AVE)
PUSM	0.764	0.769	0.864	0.680
WRSM	0.782	0.785	0.873	0.696
HC	0.843	0.854	0.906	0.762
VC	0.711	0.729	0.838	0.634
PP	0.816	0.817	0.891	0.731

**Table 8: Construct Reliability and Validity**

**Note:** PUSM=Personal use of social media, WRSM=Work-related use of social media, HC=Horizontal Communication, VC=Vertical

Communication, **PP**=Project Performance

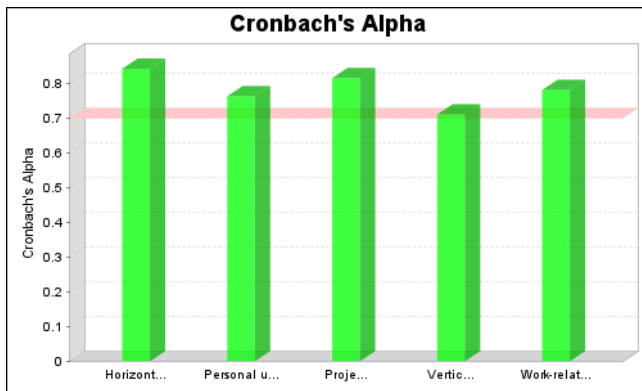


Figure 2: Cronbach's Alpha

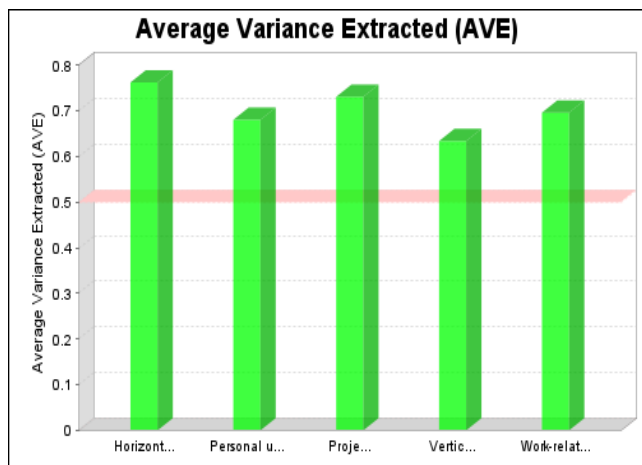


Figure 3: Average Variance Extended

Table 10 shows that all latent constructs in this investigation had item loadings larger than 0.70, indicating that good convergent validity was established.

Table 13 shows the findings of a discriminant validity CFA analysis, in which each construct's square root of AVE value across the diagonal is greater than its correlation with any other construct inside its rows and columns. As a result, the CFA analysis confirms the existence of discriminant validity.

The PLS Algorithm calculate the path coefficients, and the results are shown in Figure 3.

As illustrated in Figure 6, the Bootstrapping re-sample technique was used in SMART-PLS to examine the importance of alternative path coefficients (Hair et al., 2014). The path coefficients for the measurement model were found using bootstrapping and were given in Table 15 along with their relevant t-statistics and p-values.

	Factor loadings
PUSM1	0.788
PUSM2	0.877
PUSM3	0.807
WRSM2	0.867
WRSM3	0.820
WRSM4	0.815
HC1	0.847
HC2	0.942
HC3	0.825
VC1	0.857
VC3	0.699
VC5	0.769
PP2	0.839
PP4	0.851
PP5	0.875

Table 9: Factor Loadings

**Note:** PUSM=Personal use of social media, WRSM=Work-related use of social media, HC=Horizontal Communication, VC=Vertical Communication, PP=Project Performance



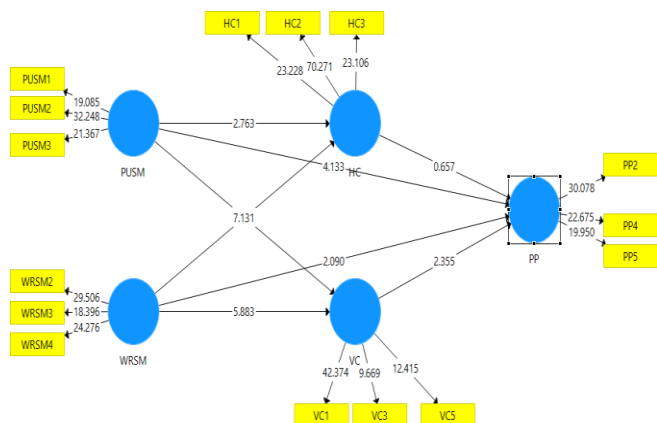


Figure 4: Structural Model

As illustrated in Figure 6, the Bootstrapping re-sample technique was used in SMART-PLS to examine the importance of alternative path coefficients (Hair et al., 2014). The path coefficients for the measurement model were found using bootstrapping and were given in Table 15 along with their relevant t-statistics and p-values

	Means	Std. Deviation	HC	PU SM	PP	VC	WR SM
HC	3.677	.539	<b>0.873</b>				
PU SM	3.926	.788	0.598	<b>0.825</b>			
PP	3.797	.831	0.549	0.696	<b>0.855</b>		
VC	3.784	.733	0.761	0.658	0.668	<b>0.796</b>	
WR SM	3.724	.911	0.724	0.598	0.617	0.707	<b>0.834</b>

Table 10: Fornell- Larcker test for Discriminant validity

**Note:** PUSM=Personal use of social media, WRSM=Work-related use of social media, HC=Horizontal Communication, VC=Vertical Communication, PP=Project Performance

	HC	PU SM	PP	VC	WR SM
HC1	0.847	0.578	0.523	0.654	0.654
HC2	0.942	0.529	0.521	0.730	0.659
HC3	0.826	0.447	0.376	0.597	0.577
PUS M1	0.493	0.785	0.533	0.514	0.445
PUS M2	0.512	0.878	0.639	0.563	0.571
PUS M3	0.474	0.809	0.547	0.552	0.458
PP2	0.482	0.603	0.843	0.620	0.601
PP4	0.463	0.545	0.848	0.553	0.536
PP5	0.461	0.637	0.873	0.541	0.436
VC1	0.682	0.542	0.636	0.851	0.667
VC3	0.642	0.466	0.356	0.718	0.562
VC5	0.497	0.562	0.574	0.813	0.452
WR SM2	0.604	0.573	0.559	0.591	0.867
WR SM3	0.559	0.440	0.425	0.561	0.822
WR SM4	0.644	0.479	0.548	0.612	0.814

Table 11: Cross-Loadings

The first criterion is PUSM, which has a weak relationship with PP and HC ( $\beta = -0.026$ ,  $p = 0.534$ ). PUSM has magnificent influence on PP ( $\beta = 0.438$ ,  $p = 0.000$ ), as does WRSM ( $\beta = 0.215$ ,  $p = 0.036$ ). The second criterion specifies that in the case of full mediation ( $\beta = 0.098$ ,  $p = 0.025$ ), the

effect of PUSM on PP through mediation (VC) must be significant, indicating that the criteria have been met. The second criterion specifies that in the case of full mediation ( $\beta = 0.098$ ,  $p = 0.025$ ), the effect of PUSM on PP through mediation (VC) must be significant, indicating that the criteria have been met. The third criterion specifies that in the case of full mediation, the influence of WRSM on PP through mediation (VC) must be significant ( $\beta = 0.153$ ,  $p = 0.043$ ). The influence of WRSM on PP through mediation (HC) is insignificantly associated ( $\beta = -0.057$ ,  $p = 0.524$ ), according to the fourth condition.

	R Square	R Square Adjusted
HC	0.567	0.562
VC	0.578	0.566
PP	0.566	0.560

Table 12: R Square

Note: HC=Horizontal Communication, VC=Vertical Communication, PP=Project Performance

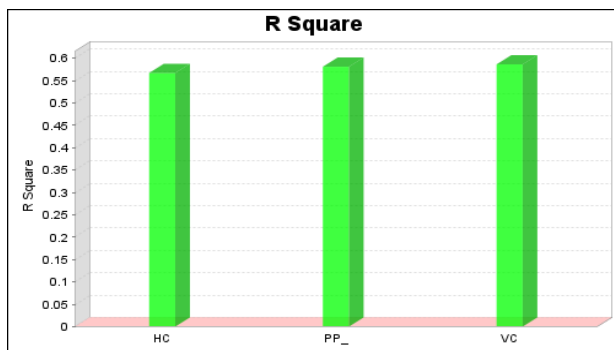


Figure 5: R Square

	Original Sample	Sample Mean	Std. Deviation	T-Values	P-Values	Confidence Interval
PUSM → PP	0.438	PUM P	0.100	4.379	0.000	0.213, 0.616
WRSM → PP	0.215	0.211	0.102	2.102	0.036	0.013, 0.399
PUSM → HC → PP	-0.026	-0.022	0.041	0.623	0.534	-0.093, 0.073
PUSM → VC → PP	0.098	0.102	0.055	2.174	0.025	0.019, 0.232
WRSM → VC → PP	0.153	0.152	0.075	2.032	0.043	0.015, 0.308
WRSM → HC → PP	-0.057	-0.061	0.090	0.638	0.524	-0.268, 0.102

Table 13: Path Coefficients

### Discussion

This study has revealed that Employees are encouraged to use Social media for personal and job-related purposes to share information about their work experience, collect and provide feedback to consumers and coworkers. Recent studies have also found that efficient information sharing and collaboration aids employees in developing social bonds with coworkers while also improving individual and organizational performance (Kim et al., 2012). The results correspond to our hypotheses: sharing and collecting knowledge both contribute to the explanation of an employee's job performance in unique ways. This relationship is strongly linked

to project performance and has a beneficial impact on it (PP). The findings of the study demonstrate that PUSM in VC has a good impact on PP. Previous studies have also shown that SM systems currently allow a variety of interactive communication elements that can be simply listed at both the individual and organizational levels (Hua and Haughton, 2012). If we look at the direct relationship between PUSM and PP, we can observe that PUSM is strongly linked to PP. When SM is used at work, it is for personal purposes with coworkers to share information. It will have a favorable impact on the project's success. Another analysis suggests that the impact of WRSM is strongly linked to project performance. Literature also tells us that constructive knowledge exchange and communication aids employees in forming social bonds with their coworkers and enhances individual and organizational efficiency (Kim et al., 2012). Employee job performance improves as a result of these social exchange interactions developing into a shared commitment to work beliefs and objectives (Banks et al., 2014)

This study stands out from the rest of the literature (Leftheriotis and Giannakos, 2014) because of its unique and original approach to variable selection, data collection, and methodology. We built a novel conceptual model and split SM use into two groups for this study's full analysis of SM usage: personal SM use and work-related SM use. Previous studies have concentrated on the direct effects of SM usage rather than distinguishing between different types of SM use, as we did in ours. People suppress their views because they are terrified of being assessed negatively and believe that speaking up would make little or no difference, which is why they rarely offer their thoughts in work workgroups supervisors and subordinates hold different hierarchical positions, there is an inherent class difference between them. Supervisors do not have the same resources as

their subordinates (Anderson & Brion, 2014; Sturm & Antonakis, 2015).

Prior studies, on the other hand, have indicated that some employees share their information with leaders, such as by launching internal social media platforms to allow employees to discuss technical and personal information. "IBM, Microsoft, and HP" are three of the world's most well-known Corporations (Leftheriotis and Giannakos, 2014). Social media, as a powerful social networking platform, consists of a collection of information and communication tools that enable a range of communication channels in both social and professional settings. Employees who use social media do more than just search for and exchange information; they also utilize to meet new people, feel more connected, and create bonds with coworkers. According to prior study, network links show the scope and strength of interactions, as well as the frequency of communication among employees (Chiu et al., 2006).

The use of social media in the workplace supports the identification of possible connections, the building of professional networks, and the deepening of relationships through connecting people with common interests and backgrounds Knowledge sharing also aids team cohesion and the creation of a shared understanding. It has been determined that knowledge transfers from lower to upper levels have a substantial impact on project success. "Knowledge sharing among project team members is vital for project performance," according to the findings. (Hsu and colleagues, 2011, p. 1) Building healthy connections between team members and leaders, according to Lee et al. (2015, p. 798) is critical because it allows for successful information flow and collaborative issue resolution in real-time and without hesitation. This sounds a lot like what He said (2012, p. 65). The study reveals that the mediation analysis of PUSM on PP via HC mediation is minor, as is the mediation analysis

of WRSM on PP via HC. These two hypotheses aren't backed up by evidence. It's also worth noting that the mediation study of WRSM on PP via mediation of (HC) is significant.

## Conclusion

In recent years, experts have recognized the value of social media in facilitating employee collaboration within firms. However, there is a lack of study on how employees' use social media for communication affects their performance, as well as how employees utilize SM to communicate their ideas/information to upper management. Our findings indicate that using social media for vertical communication has a significant impact on project success. However, the matter depends on how employees use personal social media to communicate with their top management/supervisors which helps them to express their knowledge. According to the social exchange theory and theory of virtuality, if knowledge is transferred among individuals, groups, and online communities, then it will be benefit-oriented because it enriches an individual's competency regarding learning, problem-solving, and self-improvement.

The efficient use of SM can enhance employee's utility as well as project performance increase along with organization performance. However, organizations should provide a flexible environment to their employees instead of restricting the use of social media particularly personal use of social media because organizations can benefit from considering employees' points of view and interests. This study also advised managers to create flexible environment by carefully handling employee's points of view, promoting employees innovative ideas, and governing social media use within employees.

## References

Al-Busaidi, K. A., & Olfman, L. (2017). Knowledge sharing through inter-organizational knowledge sharing systems. *VINE Journal of Information and Knowledge Management Systems*

Ali-Hassan, H., Nevo, D., & Wade, M. (2015). Linking dimensions of social media use to job performance: The role of social capital. *The Journal of Strategic Information Systems*, 24(2), 65-89.

Amis, J. M., Mair, J., & Munir, K. A. (2020). The organizational reproduction of inequality. *Academy of Management Annals*, 14(1), 195-230

Anderson, C., & Brion, S. (2014). Perspectives on power in organizations. *Annu. Rev. Organ. Psychol. Organ. Behav.*, 1(1), 67-97

Banks, G. C., Batchelor, J. H., Seers, A., O'Boyle Jr, E. H., Pollack, J. M., & Gower, K. (2014). What does team-member exchange bring to the party? A meta-analytic review of team and leader social exchange. *Journal of Organizational Behavior*, 35(2), 273-295.

Bartels, J., Peters, O., De Jong, M., Pruyn, A., & van der Molen, M. (2010). Horizontal and vertical communication as determinants of professional and organizational identification. *Personnel Review*.

Calamel, L., Defélix, C., Picq, T., & Retour, D. (2012). Inter-organizational projects in French innovation clusters: The construction of collaboration. *International Journal of Project Management*, 30(1), 48-59.

Cao, X., Guo, X., Vogel, D., & Zhang, X. (2016). Exploring the influence of social media on employee work performance. *Internet Research*.

Cao, X., Vogel, D. R., Guo, X., Liu, H., & Gu, J. (2012, January). Understanding the influence of social media in the workplace: An integration of media synchronicity and social capital theories.

In 2012 45th Hawaii International Conference on System Sciences (pp. 3938-3947). IEEE.

Cardona, P., Rey, C., & Craig, N. (2019). Purpose-driven leadership. In *Purpose-driven Organizations* (pp. 57-71). Palgrave Macmillan, Cham

Chang, K. C., Yen, H. W., Chiang, C. C., & Parolia, N. (2013). Knowledge contribution in information system development teams: An empirical research from a social

Chen, J. V., Chen, C. C., & Yang, H. H. (2008). An empirical evaluation of key factors contributing to internet abuse in the workplace. *Industrial Management & Data Systems*.

Chen, X., & Wei, S. (2020). The impact of social media uses for communication and social exchange relationship on employee performance. *Journal of Knowledge Management*.

Davison, R. M., Ou, C. X., Martinsons, M. G., Zhao, A. Y., & Du, R. (2014). The communicative ecology of Web 2.0 at work: Social networking in the workspace. *Journal of the Association for Information Science and Technology*, 65(10),2035-2047.

Eid, M. I., & Al-Jabri, I. M. (2016). Social networking, knowledge sharing, and student learning: The case of university students. *Computers & Education*, 99, 14-27.

Eid, M. I., & Al-Jabri, I. M. (2016). Social networking, knowledge sharing, and student learning: The case of university students. *Computers & Education*, 99, 14-27.

Ellison, N. B., Gibbs, J. L., & Weber, M. S. (2015). The use of enterprise social network sites for knowledge sharing in distributed organizations: The role of organizational affordances. *American Behavioral Scientist*, 59(1), 103-123

Ewing, M., Men, L. R., & O'Neil, J. (2019). Using social media to engage employees: Insights from internal communication managers. *International Journal of Strategic Communication*, 13(2), 110-132

Ewing, M., Men, L. R., & O'Neil, J. (2019). Using social media to engage employees: Insights from internal communication managers. *International Journal of Strategic Communication*, 13(2), 110-132

Flick, U. (2013). *The SAGE handbook of qualitative data analysis*. Sage

Han, J., & Hovav, A. (2013). To bridge or to bond? Diverse social connections in an IS project team. *International Journal of Project Management*, 31(3), 378-390.

He, W., Qiao, Q., & Wei, K. K. (2009). Social relationship and its role in knowledge management systems usage. *Information & Management*, 46(3), 175-180.

Hoch, J. E., & Kozlowski, S. W. (2014). Leading virtual teams: Hierarchical leadership, structural supports, and shared team leadership. *Journal of applied psychology*, 99(3), 390.

Hsu, J. S., Chang, J. Y., Klein, G., & Jiang, J. J. (2011). Exploring the impact of team mental models on information utilization and project performance in system development. *International Journal of Project Management*, 29(1), 1-12.

Kessel, M., Kratzer, J., & Schultz, C. (2012). Psychological safety, knowledge sharing, and creative performance in healthcare teams. *Creativity and innovation management*, 21(2), 147-157.

Kim, C., Lee, S. G., & Kang, M. (2012). I became an attractive person in the virtual world: Users' identification with virtual communities and avatars. *Computers in Human Behavior*, 28(5), 1663-1669.

- Lee, J., Park, J. G., & Lee, S. (2015). Raising team social capital with knowledge and communication in information systems development projects. *International Journal of Project Management*, 33(4), 797-807.
- Leftheriotis, I., & Giannakos, M. N. (2014). Using social media for work: Losing your time or improving your work? *Computers in Human Behavior*, 31, 134-142.
- Merkin, R. S. (2018). Power distance, receiver facework, innovation, and superior-subordinate relationships. In *Saving Face in Business* (pp. 165-195). Palgrave Macmillan, New York
- Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of applied psychology*, 94(2), 535.
- Naudé, P., Zaefarian, G., Tavani, Z. N., Neghabi, S., & Zaefarian, R. (2014). The influence of network effects on SME performance. *Industrial Marketing Management*, 43(4), 630-641.
- Nisar, T. M., Prabhakar, G., & Strakova, L. (2019). Social media information benefits, knowledge management and smart organizations. *Journal of Business Research*, 94, 264-272.
- Parveen, F., Jaafar, N.I. and Ainin, S. (2015), "Social media usage and organizational performance: reflections of Malaysian social media managers", *Telematics and Informatics*, Vol. 32 No. 1, pp. 67- 78.
- Popaitoon, S., & Siengthai, S. (2014). The moderating effect of human resource management practices on the relationship between knowledge absorptive capacity and project performance in project-oriented companies. *International Journal of Project Management*, 32(6), 908-920.
- Roth, P. L., Bobko, P., Van Iddekinge, C. H., & Thatcher, J. B. (2016). Social media in employee-selection-related decisions: A research agenda for uncharted territory. *Journal of management*, 42(1), 269-298.
- Perceptual and Motor Skills, 85(3), 847-850.
- Shi, P., Xu, H., & Chen, Y. (2013, April). Using contextual integrity to examine interpersonal information boundary on social network sites. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 35-38).
- Shi, P., Xu, H., & Chen, Y. (2013, April). Using contextual integrity to examine interpersonal information boundary on social network sites. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 35-38).
- Sigala, M., & Chalkiti, K. (2015). Knowledge management, social media and employee creativity. *International Journal of Hospitality Management*, 45, 44-58.
- Suh, A., Shin, K. S., Ahuja, M., & Kim, M. S. (2011). The influence of virtuality on social networks within and across work groups: A multilevel approach. *Journal of Management Information Systems*, 28(1), 351-386.
- Tajvidi, R., & Karami, A. (2021). The effect of social media on firm performance. *Computers in Human Behavior*, 115, 105174.
- Thomas, M., Jacques, P. H., Adams, J. R., & Kihneman-Wooten, J. (2008). Developing an effective project: Planning and team building combined. *Project Management Journal*, 39(4), 105-113.
- Tijunaitis, K., Jeske, D., & Shultz, K. S. (2019). Virtuality at work and social media use among dispersed workers: Promoting network ties, shared vision and trust. *Employee Relations: The International Journal*.

Tsay, C. H. H., Lin, T. C., Yoon, J., & Huang, C. C. (2014). Knowledge withholding intentions in teams: The roles of normative conformity, affective bonding, rational choice and social cognition. *Decision Support Systems*, 67, 53-65.

Usman, M., Javed, U., Shoukat, A., & Bashir, N. A. (2021). Does meaningful work reduce cyberloafing? Important roles of affective commitment and leader-member exchange. *Behaviour & Information Technology*, 40(2), 206-220

Vyas, P. G., & Pandey, S. (2020). The effect of social networking sites use on employees' knowledge sharing. *European Journal of Training and Development*.

Wang, D., Waldman, D. A., & Zhang, Z. (2014). A meta-analysis of shared leadership and team effectiveness. *Journal of applied psychology*, 99(2), 181.

Weatherbee, T. G. (2010). Counterproductive use of technology at work: Information & communications technologies and cyber deviancy. *Human Resource Management Review*, 20(1), 35-44.

Wong, L. H., Ou, C. X., Davison, R. M., Zhu, H., & Zhang, C. (2016). Web 2.0 and communication processes at work: Evidence from China. *IEEE Transactions on Professional Communication*, 59(3), 230-244.

