Roles of Self-Efficacy in Using Social Networking to Improve Productivity

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Abstract

The challenge most organizations are facing is how to make effective use of available social networking technologies for enhancing employees' productivity. This has recently gained considerable attention from organizations around the world that are experiencing a major shift in their corporate environment and specific working requirements. The purpose of this study is to examine the relationship between social networking technologies on employees' productivity and also to determine how knowledge sharing self-efficacy of employees affects this relationship. The sample data were collected from academic and financial institution staff working in different universities located in Islamabad, Rawalpindi, and Wah Cantt cities of Pakistan. Structural Equation Modelling technique using the SmartPLS software tool was applied to the data for statistical analysis. The results of the study revealed that the use of social networking technologies for knowledge sharing has a positive significant impact on employees' productivity. Furthermore, the self-efficacy factor proved to be a significant positive moderator in strengthening the direct relationship between social networking and employees' productivity. The findings provided useful insight for policymakers in service sector organizations to plan for the effective utilization of social networking technologies among employees for achieving desired organizational outcomes.

Disciplinary: Management Sciences, IT Application.

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1 Introduction

Productivity of the organization increases when employees give preference to working with the personnel that gives priority in achieving the company's goal (Leonova et al., 2021). Employee productivity is measured as a key component for a company's success. It is considered to be the driving force to lead towards enhancing employees' efficiency and deliverability (Almaamari and Alaswad, 2021). Worker productivity is thus a major element in the economic growth of a country as well as the success of any organization. In this study, we look at productivity in the service sector of a developing economy, namely Pakistan. Pakistan's economy relies on three main contributing pillars; are service sector, agriculture, and industry. Pakistan's Gross Domestic Product (GDP) has been lowered because of competition from emerging economies of other countries. In the last seventy years, it came to the lowest level of -0.4 equated to last year's 2019 growth of 1.0% (Pakistan Economic Survey 2020, pp-iii-v). Due to the COVID-19 situation in the country, the world's economic growth, in general, was negatively affected (Tagar et al., 2021).

In the 21st century, the service sector has become a central force in economic growth and development specifically in emerging areas such as Information Technology (IT), creativity and innovation (Rahman, 2020). According to Pakistan Economic Survey, the overall advancement in Pakistan in the year 2018-19 in service sectors is 4.71%. Progress of 7.05% is seen in IT, education, health and social sciences. Total growth of 5.14% is seen in financial, banking and insurance divisions, positive incline has been seen in insurance sub-division, scheduled banks and non-scheduled displayed 24.6, 5.3, and 12.8%, respectively.

Railways 38.93%, airborne operation 3.38%, transport division 3.34%, transport 3.38% and storage communication has shown positive contribution. Development in the departments of executive authorities increased up to 7.99%, where a 4.0% increase has been seen in housing services. Bulk growth in wholesale, livestock sectors and retail added value (2018-2019).

These statistics showcase the vital role the service sector plays in modern economies generally and, specifically, for Pakistan's economy. Therefore, it is vital to study how productivity can be enhanced in this sector in novel and practical ways. This paper comes in this quest. This paper focuses particularly on the use of social networking tools and their effect on the performance of the employees working in the service sector.

2 Literature Review

2.1 Social Networking and Employee's Productivity

Social Networking provides people an open platform where they can join the symposium and engage in a discussion without any restrictions (Ellison et al., 2015). These podiums are not time-bound for sharing knowledge, they permit individuals to contribute and interact for their intellectual development (Treem & Leonardi, 2013). It is a forum where different people effortlessly communicate with each other and in groups. Social Networking reduces the intensity in the discussions and connects the individuals by allowing them to interact, analyze, and perceive

digitally (Leonardi & Meyer, 2015). Social networking platforms have become dynamic sources of learning vibrant business methods for professional development. Promoting social networking in the organization enhances the employees' development through participation, job satisfaction, productivity, commitment, and contribution (Grant, 2016). Employees improve their knowledge through observation, information, documents, and communication through social networking (Leonardi, 2014). Scholars have found it difficult for organizations to disseminate information when the target audience is unknown. When information is visible on social networking, uncertainties between the source and the target are minimized (Leonardi & Meyer, 2015). Organizations can achieve greater growth, employee involvement, efficiency, competitiveness and well-being by promoting the use of social networking applications and tools (Grant, 2016).

Studies have reported that sharing knowledge improves the efficiency level and decision-making power of the employees (Kanawattanachai & Yoo, 2007; Kim, 2011). Employee productivity can be improved by 20 to 25 percent through the increased use of social networking (Ali-Hassan et al., 2011; Andriole, 2010; Denyer et al., 2011). Forrester Group revealed in a study of an organization with 7000 employees that using social networking tools has increased 365 percent return on investments in the last three years (Dodd, 2011). Knowledge alliance via social networking platforms significantly affects the seller-customer relationship management, time and cost, work procedures, and job performance. The theories have also highlighted the significance of mounting effect and interactive practices inside the company (Grant, 2016). Especially the various social-related theories provide insight to management about the impact of emerging societal and communication methods at workplaces (Morgan et al., 2017). Knowledge sharing theory also implies that systematic use of social networking tends to build competencies and efficiencies among employees. Similar findings have been reported by a study that investigated the 4,568 operators engaged with the enterprise system (Deng & Chi, 2015).

Researchers argued that users of social networking platforms can create a positive impact on their work execution as it has been observed that an increase in productivity also improves the work performance of the employees (Thom-Santelli, 2011). Therefore, social networking websites and tools have a significant impact on productivity by allowing employees to convert their knowledge, experience, and skills into social capital for an organization. As discussed in several past studies, using social networking for internal and external knowledge sharing has resulted in increased employees' efficiency and productivity (Kuegler et al., 2015). Therefore, this study hypothesized that

> **H#1**: There is a positive relationship between Social networking (SN) and employee productivity (EP)

2.2 Knowledge Sharing Self-efficacy as a Moderating Factor

The meaning of self-efficacy is that individuals have their judgment about their abilities and competence to consolidate and perform actions that are essential to achieve a definite level of achievement (Bandura, 1986). Some scholars advised that an individual's self-efficacy can

stimulate or encourage employees to transfer their expertise with their fellow workers (Wasko & Faraj, 2005). It is recognized as the promoter of sharing knowledge (Bandura, 1982a, 1986; Igbaria & Iivari, 1995). If an individual considers knowledge sharing as an important concern or they are internally encouraged to discourse them, then the connection among knowledge sharing behavior would become more apparent or understandable (Singh et al., 2016).

Furthermore, the workforce who is willing to succeed in their jobs is those who are more self-assured in their capabilities to offer their expert and valued information (Constant et al., 1994). Knowledge sharing self-efficacy is mostly observed in those workers who are certain that their expert information can aid in solving problems at work and can enhance work-efficacy (Luthans, 2002). The employees who are confident that their valued knowledge sharing will pay to increase the performance of their company will cultivate the positive willingness and eagerness to collect and donate knowledge and information (Luthans, 2002; Svetlik et al., 2007).

In this modern world, knowledge is considered one of the utmost assets, decreasing its production part to a lesser location. Besides, sharing knowledge shows the way to economic advancement to the institutes. Moreover, due to the rise of Information and Communication Technologies (ICTs), the use of cybernetic teams is increasing to help businesses. The question is, does social networking inspires or encourage knowledge transfer methods. Lastly, the validity was established for knowledge sharing, considered as information via proof test, organizations are seeing it as an important resource for the institutes and firms (Wu et al., 2006). The researcher carried out a study to analyze the impact of motivational aspects and behavior of organizations and individuals toward knowledge sharing. She comes up with the result that organizational feature that is higher-ups support and an individual factor which is knowledge self-efficacy and satisfaction in helping others, both contributed considerably to sharing knowledge (Svetlik et al., 2007). Thus, this study will consider

H#2: High level of knowledge sharing self-efficacy (KSE) positively moderates the relationship between social networking (SN) and employee's productivity (EP)
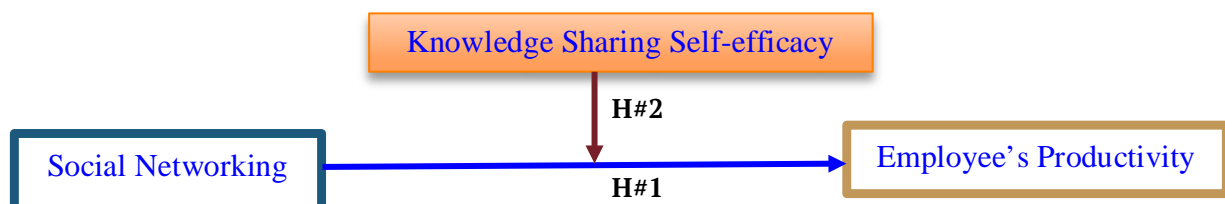

Figure 1: Research Model

3 Methodology

3.1 Population and Sampling

Faculty members and operational staff related to the financial sector and educational institutes situated in Rawalpindi, Wah Cantt, and Islamabad, Pakistan are the population for research. The data was collected through a self-administrative questionnaire. To define the sample size, the research adopted a convenience sampling technique. Among the respondents, 500

questionnaires were circulated. The number of questionnaires resumed was 403, therefore, 80 percent was the response rate of the survey. Determining sample size, a software named G Power and (Krejcie & Morgan, 1970) design was used for calculation. The novel technique, G Power is applied to analyze sampling. This software examines the strength for calculating the sampling of the survey, a dynamic software for a study. Power analysis of different tests including z test, chi-square, exact test, t-test, and F test is investigated through this software (Faul et al., 2007). For achieving correct and appropriate results, a 403 sample size was evaluated. The sample size was calculated through G Power software.

A self-administrated questionnaire is prepared for the collection of data from the respondents through a survey. The respondents are educated and the working language is English in Pakistan, the questionnaire was prepared in the English language.
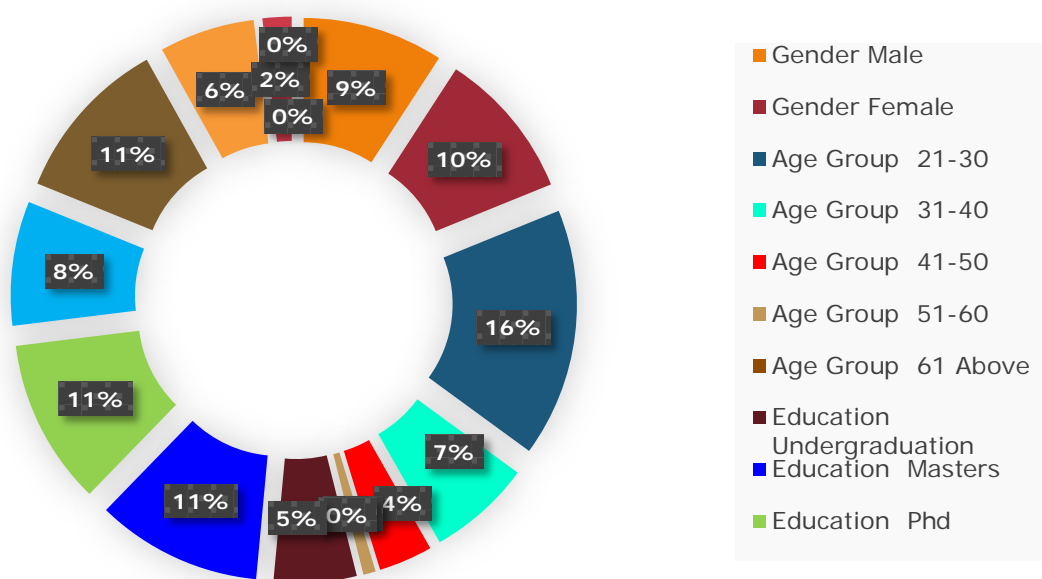

Figure 2: Graphical Presentation of Respondents Background

The statistics of the demographic presentation about the surveyed respondents for sector, experience, age-wise, qualification, and gender are demonstrated graphically in Figure-2. Respondents are categorized based on gender (34% percent female and 66% percent male). The respondents' ages fall between 60% and 25%, no respondents are in the age group of >61. Mainly the respondents possess 6-12 years of experience, which is 40%, concerning their education more or less all respondents possessed graduate education including master's degree and PhD degrees.

3.2 Research Instruments

Variables are social networking, employee productivity, and knowledge sharing self-efficacy. A five-point Likert Scale ("1 for strongly agree" to "5 for strongly disagree") was used for gathering responses from the target respondents for all three variables. This research questionnaire is built from the original feedback form.

Table 2: Distribution of Instrument Variables

S. No	Variables	Items	Sources
1.	Social Networking	06	Kuegler et al., (2015)
2.	Employee's Productivity	06	Than-Santelli et al., (2011)
3.	Knowledge Sharing Self-efficacy	04	Kankanhalli et al,. (2005)

4 Data Analysis

Initially, the MS Excel Software analysis package is used for data coding. This software is generally used for primary testing and coding to quantify data's normal situations like unengaged responses and missing values. When the gathered data is validated for normality conditions, the collected data is imported into Smart PLS software for further scrutiny, then the file is saved in the CSV format. Structural equation modeling (SEM) is a frequently used technique for partial least squares structural equation modeling for the evaluation of the multi-layered association between hidden and perceived variables.

Internal consistency. Internal consistency between items of a research instrument determines the reliability of the scale through estimated values of Cronbach's alpha (Hair et al., 2014). To analyze the proposed model in the advanced phase, data reliability is determined through the values projected for Cronbach Alpha (CA) and Composite Reliability (CR). Defining the acceptable level of data reliability, the projected standard is 0.60 or greater for Cronbach Alpha and Composite Reliability are applied. Whereas, values that show lower reliability are values that are less than 0.60. Higher consistency of items shows higher composite reliability. In this research, the values of Cronbach alpha and Composite Reliability are within the range from 0.60-0.80, showcased in Table 1. Standards presented are in the upward unit of reliability construct that shows variables utilized in the study instruments' at a higher scale of internal consistency.

Table 1: Internal Consistency Measures.

Variables	Composite Reliability(CR)	Cronbach's Alpha(CA)
EP	0.92	0.89
SN	0.85	0.78

Note. EP=Employees Productivity, SN=Social Networking

Path coefficients. To calculate the structure model of this study, the path coefficient" is also utilized. The standards of the path coefficient" are analyzed for checking the strength and importance of the connection among the new two variables. SmartPLS" named as Bootstrapping" is utilized for getting the standards examining connections (paths) among independent" and dependent" variables. However, examining the significance of every path present between the variables is validated through t-statistics and p-values. According to the previous scholar, when they are measured empirically t-value is greater than the critical value, the coefficient is calculated significantly at explicit confidence level. The t-value of 0.95 segregated at an important standard of 0.05 in this study (Hair et al., 2014).

The nonparametric statistical test recognized as bootstrapping executed by PLS-SEM is used to calculate the significance of the projected path coefficient (Hair et al., 2014). The values of the

coefficient range between -1 and +1. Therefore, coefficient values close to +1 presents a strong relationship, whereas values near -1 show a weak relationship. The acceptance and rejection of a hypothesis depend on path valuation.

4.1 Hypothesis Testing

In accordance with the outcomes collected through PLS-SEM", the hypothesis of this study is verified via a structural model. At a significance level of 0.05, t-value, p-value, and values of path coefficient are assessed to check the hypothesis. Depending on the standards every hypothesis" is accepted in this study. Two hypotheses are showcased in the current research to analyze the direct" and indirect" relationship between the projected variables. The predictable hypothesis is stipulated below:

Social networking on employee productivity. According to the output, the coefficient value among social networking as well as employee productivity is estimated at 0.498. The t-value is 11.007, calculated the impact of the pathway that is greater than the critical value of 1.96. The P-value of 0.000 is significant of the path coefficient. According to the empirical confirmation, hypothesis H#1 is accepted and establishes a significant effect of social networking on employees' productivity. This study, t-value, p-value, and path coefficient between the variables are shown empirically in Table 2.

Table 2: Path Coefficients

Path	Path Coefficient	Mean	SD	t-Statistics	p-value
SN ➔ EP	0.498	0.502	0.045	11.007	0.000

Note. SN=Social Networking, EP=Employees Productivity

KSE as a moderator between SN and EP. The moderator variable in any study influences the relationship between independent and dependent variables in such a way that it could either impact the strength of the relationship or direct the relationship. The moderating effect is estimated by multiplying the values of each item of the independent variable with each item of the moderating variable and then calculating the multiplier effect over the dependent variable. The values of moderating effects are measured through either product indicator or two-stage methods in Smart PLS.
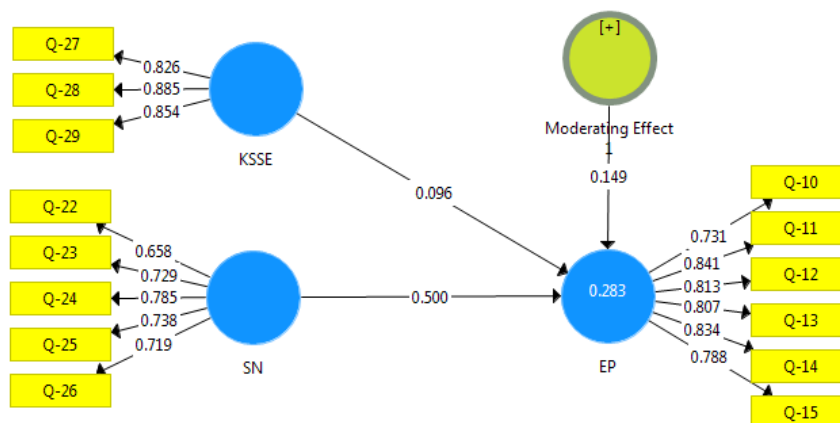

Figure 3: Moderating Effect of KSE over SN & EP.

Table 3: Significance of the Moderating Effect of KSE over SN & EP

Path	Path Coefficient	t-value	p-value
Moderating Effect KSE ➔ SN ➔ EP	0.149	2.470	0.007

Note. Knowledge Sharing Self-efficacy=KSE, Social Networking=SN, Employee's Productivity=EP.

For this research, the two-stage method has been adopted. At the first stage, the moderating effect has been estimated and the significance of the moderating effect is tested through t and p values. In a second stage, the two-way interaction term is measured to determine the strength of the relationship in terms of high or low with respect to the value of the moderating effect.

Figure 3 and Table 3 highlight the value of the moderating effect as 0.149 (t=2.470, p=0.007) which determines the fact the KSE positively and significantly moderates between SN and EP.
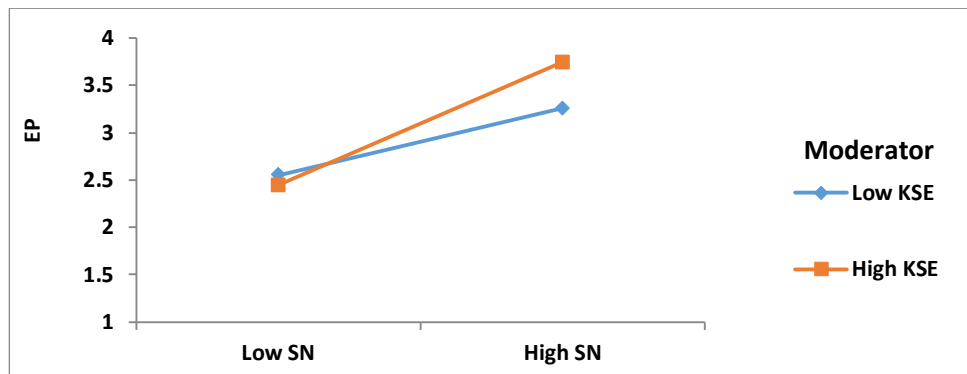

Figure 4: Two-Way Interaction Term

A second stage, measuring the two-way interaction while taking up non-standardized path coefficient values of moderator and independent in consort with the value interface term (measuring in the earlier phase) in the worksheet of Microsoft Excel (reference Figure-4) established by Jeremy Dawson (jeremydawson.co.uk). Subsequently, hypothesis H#2 is a top-level knowledge sharing self-efficacy (KSE) positively strengthened the relationship between social networking (SN) and employee productivity (EP). The upward slopes highlighted in Figure-4 confirmed the hypothesized moderating effect of KSE; in other words, when KSE is higher, the relationship between SN and EP is positively strengthened. Thus, hypothesis H#2 is accepted.

5 Conclusion

This study adds importance to the prevailing work allied to social networking and its effects on employees' productivity. Significantly, the study contributes by analyzing the moderating role of perceived knowledge sharing self-efficacy.

The initial facts were gathered through a survey which was self-administered from 403 (four hundred and three) operational staff and faculty members employed in financial and educational institutes located in Wah cantonment, the capital city of Islamabad, and Rawalpindi Pakistan. A pragmatic examination of the operational model of the study revealed a direct association of social networking which is positively linked to employee productivity. The moderating impact of perceived knowledge sharing self-efficacy has also been found to have a significant role in

strengthening the relationship between social networking and employee productivity. This study is innovative research to the problem about the moderating effect of perceived knowledge sharing self-efficacy between the workforce employed in financial and educational institutes of Pakistan.

According to the argument, it is anticipated that employees' productivity in terms of efficacy and output is becoming evaluative in the service sector as the standard of services is mainly shaped by the use of social networking tools for improving the productivity of employees. This study has empirically verified that using social networking applications and tools boosts the productivity of employees in HEIs in Pakistan. This research has further focused on the evolving concept of knowledge sharing self-efficacy in the literature. This study has achieved its aim in justifying the hypothesized relationships in terms of previous findings. This study creates a platform for future studies that can expand the anticipated framework with extensive findings explicitly the proposal/idea of knowledge sharing self-efficacy as moderator for workforce productivity which could be investigated in different contexts.

For the last two decades, the issue and concept of employee productivity have been studied in multifaceted ways. This research provides practical implementation in financial and academic institutions. Firstly, the service sector, specifically HEIs, is advised to prepare, implement and communicate procedures to motivate well-versed and qualified employees to share their valuable professional expertise, knowledge, skills, experience, and innovative ideas via social networking within the organization personnel for their knowledge advancement. This, as this study showed, enhances productivity and allows organizations to capitalize on their staffs' knowledge.

Moreover, organizational leadership should take decisions to establish a system of knowledge exchange channels using social networks to enhance productivity that allows for making hidden knowledge of some staff members visible to other colleagues in the organization. Reciprocating and interchanging knowledge among fellow employees via state-of-the-art automated resources, develops and enhances creativity and efficiency levels. A fundamental management system can be built in organizations for ongoing training and intellectual renewal. This will help the employees to get an excellent opportunity to gain creative, innovative, and up-to-date professional expert knowledge available in the electronic library database and learning management systems for their advancement. Lastly, this research proposes key stakeholders, policymakers, and regulators in HEIs of Pakistan to analyze and instill flexible and agile organization culture for increasing the productivity of employees while using different tools of social networking in the service industry.

6 Availability of Data and Material

Data can be made available by contacting the corresponding author.

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