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# Examining the Practical Implementation of New Media Technologies in Public Sector: An Empirical Study

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**Abstract:** In developing nations such as Pakistan, new media technology presents a novel strategy for governments to improve information management and access to government facilities, as well as transparency, accountability, public participation, and cooperation. This study, which focuses on Pakistan's four largest cities, aims to investigate how public officials use new media technologies and how this influences accountability, transparency, and overall productivity. To accomplish this, 470 public sector workers from four Pakistani cities are sampled. The Unified Theory of Acceptance and Use of Technology (UTAUT) model of technology acceptance and its implementation serves as the basis for this study's survey-based quantitative research technique, which enables it to accomplish its objectives. To fill the research gape the research questions were addressed to answer the impacting factors of adoption of new media technologies in the public sectors. Results from the study reveal that a significant majority, over 87% of participants think new media technology helps them accomplish their jobs and has raised their productivity. Eighty-eight percent of respondents shared a similar opinion, stating that senior management and organizations are committed to increasing the use of innovative media technologies. However, the results show that 55% of public organizations employ new media technology to provide better services to the public in response to their requests. The use of unofficial, bottom-up methods, financing scarcity, technology constraints, and resource scarcity are the main obstacles. Thus, while the potential benefits are recognized, overcoming these challenges remains crucial for the effective integration of new media technologies in the public sector.

**Keywords:** New Media Technologies, Public Sector Organizations, UTAUT model, government services, Pakistan

## 1 Introduction

Government services are actions governments take to assist their citizens [1]. It refers to any service provided by the government to a large number of its citizens [2]. Legislative and executive regulations establish the nature of public services [3]. As new challenges and requirements emerge for citizens, public services are often modified and modernized. Certain public entities seek to radically alter the provision of public amenities to provide better service to the public [4]. There are at least three major IT theories in public administration. The first is the theory of technological dynamism, which asserts that the concept of technological determinism is a driving force in information system transformation [5].

This theory states that new technology causes change and is eventually applied by the government. The second is the "reinforcement theory," which claims that administrations will accept IT if it is consistent with their organizational change philosophy [6]. Ultimately, it argues that voters reward politicians who express their opinions on various issues during elections. In public administration, information technology is implemented if it supports the administrators' vision for the organization's future. The third hypothesis is known as the socio-technical hypothesis, and it states that people operating within the social system build organizations by making use of various tools, skills, and knowledge [7]. Finally, it argues that external environmental demands influence technical evolution. These theories suggest that corporate cultures, social systems, and the attitudes of public authorities all play important roles in adopting information technology for organizational change.

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While scholars have made significant progress in identifying the factors that have a major effect on people's willingness to try out NEW media innovations, this is not the case with Pakistan, as the scholars have not yet discovered how Pakistan can develop the best model of NEW Media Technologies for good governance and which are the significant factors to adopt new media technologies in government agencies. In both settings of literature and the emerging country, little is known. Therefore, scholars [8] have called to explore the area and fill the gap. Despite the range of studies [9-11] in which public organizations were found to underutilize new media technologies in Pakistan, there has been a lack of research into the intentions behind New Media technology use in the public sector for public relation. For a better understanding, this study aims to investigate how personnel in Pakistan's public sector utilize new media technologies from a cognitive perspective.

To provide quality service to the citizens [12] identified some factors that need consideration, which include (i) transparency between service providers, users, and the community; (ii) recognition and engagement from the entire accessible population and service users via dialogue and consultative strategic planning; (iii) relevant data about the accessibility, execution, association, and efficiency on users' interests; and (iv) access, including accessibility. Suppose the government adopts the system for delivering public services and considers these factors. In that case, there will be an accountable and dependable government that delivers public services successfully and fairly. Governments may try to be innovative when offering public services [13] and urge users to play a powerful role in ensuring a high-quality service [12]. Governments may also enrich credibility in providing services by reorganizing their operations and modifying their service delivery techniques [14].These efforts must extend basic automation, and public service delivery firms must be carefully considered [15]. Various names have been given to these kinds of motivating factors, such as Performance Expectancy (PE), Social Influence (SI), Effort Expectancy (EE), and Facilitating Conditions (FC). The evaluation of computer systems and the use of information technology in public entities is the responsibility of the UTAUT (IT). The link between independent variables such as performance expectation, social influence, effort expectancy, and facilitation circumstances on technology adoption in a public office for employees is investigated using the UTAUT modified model [16].

Governments all around the globe are beginning to recognize the relevance of new media technologies and are increasingly utilizing them to communicate with their constituents. To avoid reputational damage, many experts [9, 11, 17, 18]. Khan et al., [19], state that the public sector must accept change to avoid endangering its reputation. Communication must also be reliable, constant, and trustworthy. This requires organizational changes in behavior and operations, which will necessitate organizational changes [20-22]. The problem statement for the empirical analysis of the adoption of new media technologies in public sector organizations in Pakistan lies in the scarcity of comprehensive studies addressing the dynamics and challenges of this adoption process. While new media technologies offer the potential to enhance communication, collaboration, and transparency, their integration within the public sector remains underexplored in the Pakistani context. The existing literature lacks in-depth insights into the factors influencing the adoption, the impact on organizational processes, and the barriers hindering successful implementation. Additionally, there is a dearth of empirical evidence on how organizational characteristics and contextual factors in the Pakistani public sector affect the assimilation of new media technologies. Understanding these aspects is crucial for policymakers and practitioners to make informed decisions and formulate effective strategies for the successful incorporation of new media technologies in public sector organizations in Pakistan.

An excellent implementation strategy is required to make the most of today's cutting-edge media technologies and minimize their associated risks [23,24]. Pakistan, a developing nation, still uses conventional administration methods in its public sector organizations to communicate and provide information and required documents to the general public. There has been no previous research into the relationships that can exist between the independent variables, such as expected performance and expected effort, as well as the conditions of facilitation and social influence, and perceived organizational support that can be used as moderators for increasing the adoption of new media technologies among public sector employees. Therefore, it is essential to fill this gap in this study. The study also identifies the below research questions and attempts to address them in this study. What are the influencing elements for adopting NEW Media Technologies (NMTs) in Pakistani government institutions? How can public sectors in Islamabad, Lahore, Peshawar, and Karachi (Four cities of Pakistan) promote the adoption of NEW Media Technologies in Employees for good Governance?

This study's main objective is to ascertain whether or not these internet technologies have significantly influenced government decision-making since it is focused on evaluating how new media technologies have impacted Pakistan's public sector. The primary goal also extends to analyzing the facilitation condition, perceived organizational support, availability of necessary infrastructure, and ICTs-related knowledge and skills. The following are the intended goals of this study:

1. To determine the elements that significantly impact how Pakistan's government entities adopt NEW Media

Technologies.

2. To learn the policies of Pakistan's government on their NEW Media Technologies use.
3. To determine how the government of Pakistan is using NEW Media Technologies in its excellent governance.
4. To evaluate the impacts of emerging media technologies on good governance
5. Analyze how organizational management promotes new media technology adoption in the concerned department.

Through systematic research and data-driven insights, this study has illuminated the challenges and opportunities associated with incorporating new media tools in governmental functions. It sheds light on the factors influencing adoption, such as organizational culture, resource constraints, and policy frameworks. Additionally, the research provides valuable recommendations for policymakers and public administrators to enhance the effective implementation of new media technologies, fostering transparency, efficiency, and citizen engagement. By bridging the gap between theory and practice, this empirical analysis contributes essential knowledge that can inform strategic decision-making in the digital transformation of public sector entities in Pakistan.

## 2 Literature review

Today, new media technologies are more than merely communication media. Instead, new media technologies are tools to boost citizen participation in public administration services, foster responsive governments, encourage transparency and accountability, and improve service delivery. Globally, governments and private organizations are rapidly improving their use of new media technology, changing how people interact, run and manage administrations and deal with those seeking assistance from governmental or non-governmental groups. In the United Kingdom, e-Government frequently signaled a significant change in the status of public office-related technologies, according to Budd and Harris [25]. While the usage of new media among government and private organizations worldwide is increasing, Pakistan still faces difficulties in using new media technology in public or private enterprises. Pakistan can benefit from implementing e-governance in both internal government organizations and public organizations to achieve long-term socio-economic growth [26, 27].

*Advantages of using new media technologies in the public sector:*

Ndou [28], argued that when emerging and developed countries engage in e-government initiatives, they derive the same advantages and benefits. On the other hand, electronic government apps offer several benefits for people, businesses, and government organizations. Government facilities and relationships with citizens are improved via 24-hour online services. Seifert [29], supported by Wang and Rubin [30], also stated that e-government deployment might also cut operational costs and procedures by reducing and simplifying the bureaucracy involved in the procedure. Online services also aid government agencies in enhancing performance and guaranteeing everyone access to public services. Additionally, according to Cohen and William [31], e-government has several benefits, including being more affordable and increasing the effectiveness of public service operations. These advantages include greater efficiency and transparency and expanded services for residents.

Moreover, Harrison et al., [16] demonstrated that transparency relates to providing the public with the availability and increasing flow of high-quality, up-to-date, relevant, reliable, and timely information on government activities. In addition, Bertot et al., [32] and Adam [33], also argued that new media technology could increase access to information, ensure rules are transparent and followed, and foster the capacity to trace government workers' decisions and actions. Lio et al., [34] also mentioned that e-government might help rid discretion, which is another kind of corruption where users work with a carefully defined set of rules controlled electronic systems. As a result, it eliminates the opportunity for public officials to participate in the process. A research study used an instrument to evaluate public perceptions of online administration and discovered that digital governance is seen as an anti-corruption solution [35]. Malhotra [36] and Li [37], argued that the continual redefinition and adaption of objectives, purposes, and the adaptation of innovative technologies as ICT and practices were crucial for organizations to persist in competition.

*Challenges associated with new media technology adoption in developing nations:*

Regardless of the perception that new media technologies offer good promise for sustainable advancements in electronic government, most of this possibility stayed unexploited in developing nations. According to Allen et al., [38] and Henman,

[39], e-government programs required the development of more sophisticated operational and technological capacities, transforming government-business relationships, and overcoming several adaptation issues. According to e-government specialists, information and communications technology infrastructure is a significant barrier to implementing a successful e-government program. This opinion is confirmed by [40, 41].

Alghamdi et al., and Susanti et al., [42, 43] claimed that a digital gap often exists in developing nations, and E-Government needs ICT infrastructure that many countries don't have. E-Government cannot be implemented without adequate infrastructure for new technology and communications tools. In addition, Wang et. al., [44] categorically discussed that the practical usage of E-Government applications requires people to be tech-savvy and knowledgeable about digital media. For e-government's effectiveness, people must have the education, freedom, and willingness to use new media technology. According to research by [45], the biggest barrier to an e-government initiative is that many public sector employees lack IT skills. Lack of competent employees and poor human resources training have been longstanding problems in underdeveloped nations. Ziemba et al. [46] emphasized that learning new technology quickly and changing from traditional work methods are particularly difficult tasks.

Several investigations [47-52] have been carried out worldwide to learn more about new media technologies' adoption. Each study helps to develop a unique theoretical knowledge of their used theoretical model. But, according to Mohammad et al., [53] the shortage of well-trained employees and insufficient human resources training has plagued developing nations for years. Haider et al., [54] conducted a research study to investigate how Pakistan's online administration transition is progressing. The study looked at e-government service consumption trends in little cities and concluded that although e-government services are gaining popularity among citizens, adoption rates among agencies were low.

In their study, Altaf et al., [55] conducted an investigation into the utilization of social media (SM) as a means to enhance the efficacy of libraries in Pakistan. The researchers identified three primary hurdles associated with the implementation of SM in library settings, namely: 1) technical difficulties, 2) limitations imposed on the usage of social media inside the workplace, and 3) inadequate internet connectivity. Similarly Abbas et al., [56] study stands out as one of the few that has explored specific research area in new media. The study conducted a comprehensive analysis of the existing literature, precisely identifying 18 distinct criteria pertaining to both hostile and constructive aspects of social media. The results of the study indicate that the utilization of social media in Pakistan has a detrimental impact on the conduct of students, in contrast to its favorable effects. Also, Almudahi et al., [57] have observed a prevailing information gap concerning the potential implications linked to the utilization of social media platforms, particularly in relation to video content, network formation, image sharing, and the expanding user base. This knowledge gap is significant as it amplifies the susceptibility to various vulnerabilities and attacks. The study put up some recommendations for the minimization of risks and threats associated with online content publication. In their study conducted by Abu Bakar & Ahmad [58] examined the various factors that influenced the adoption of social media by small and medium-sized enterprises (SMEs) in the United Arab Emirates (UAE), as well as the subsequent impact on their performance. The researchers discovered that the widespread use of social media did not have a significant impact on the performance of small and medium-sized enterprises (SMEs). The implications of these findings may offer valuable insights for managers and decision makers operating within the small and medium-sized enterprise (SME) sector. By staying informed about the latest advancements in social media concepts, these individuals may proactively adapt their strategies to leverage the growing prevalence of social commerce.

Theoretical framework:

Numerous theoretical viewpoints have been used to investigate the challenges of technical acceptability, actual use, and their interrelationships. This research employs an empirical survey strategy for research to achieve its purpose. The core of this strategy is the updated version of the Unified Theory of Acceptance and Use of Technology (UTAUT) model of how people accept and make use of technology. It is essential to investigate the factors driving the proliferation of new media solutions in Pakistan using the UTAUT model developed by Venkatesh et al., [59] if one wants to have a better understanding of Pakistan's adoption of electronic government services.

According to the UTAUT model, the characteristics that drive technology adoption are performance expectancy, social influence, effort expectancy, and enabling factors. The model shown in Figure 1 explains how performance expectancy works, which is one of the factors that impacts how quickly new technologies are adopted.

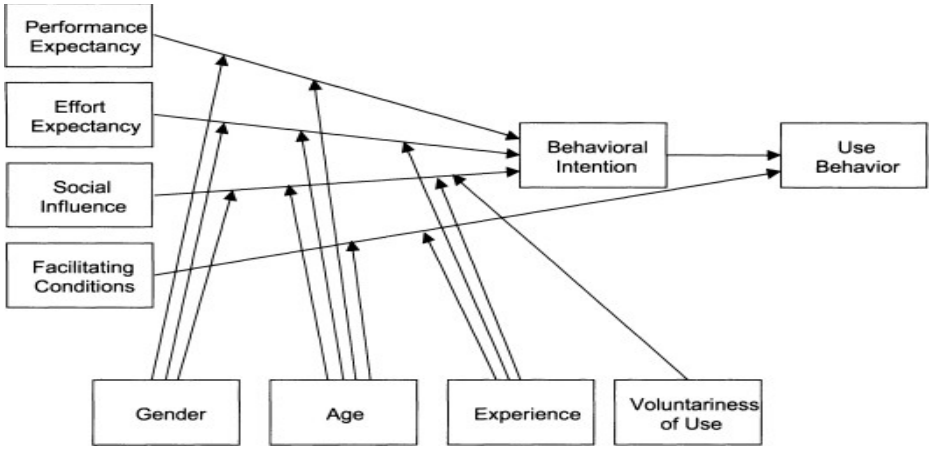


**Fig. 1:** Theoretical Framework.

## 3 Methodology

This study considers a progressive experimental evaluation as quantitative design based on survey methodology [60]. Statistical tools, including Reliability Statistics, the Chi-Square method, Pearson analysis, and the Pearson Correlation coefficient, were employed to analyze data collected from 470 government officials. The data were gathered through an online survey conducted in major cities of Pakistan. This study estimates a multiple regression model using descriptive analysis in order to find the factors that influence the adoption of new media technology. The model reflects the association between five broad category variables and one mediating component (purpose of utilizing and perception to use advanced media technologies).

### *3.1 Development of Measurement Items& Ethical Consideration*

The four measurement items namely Expectancy (PE), Social Influence (SI), Effort Expectancy (EE), and Facilitating Conditions (FC) were adopted from UTAUT model framework of Venkatesh et al., [61]. Prior to the beginning of this investigation, the ethical considerations were reviewed by the research committee of the College of Public Administration at Huazhong University of Science and Technology in Wuhan, China. Both parties gave their approval to move forward with the investigation. All data were anonymized at every point, from transcription to publishing, and pseudonyms were utilized to protect participants' identities. A consent letter was also included with the questionnaire to let the participants know about the study's goals and the importance of their voluntary involvement.

### *3.2 Sample size and data collection:*

The majority of information in this study comes from primary sources. Primary data is gathered from government or public organizations, including the ministries of education, health, and information and broadcast, in Pakistan's city corporation regions (Lahore, Karachi, Peshawar, and Islamabad cities). The selection of city corporation regions as the sample unit's locations were motivated by the fact that they are densely populated with a diverse range of government entities, all of which attempt to provide online services to their consumers. The study followed area cluster sampling and then applied random sampling on each cluster. The sample participants are drawn from each organization's management sector and lower-category employees. The Employees of public organizations in the selected cities of Pakistan with a minimum of 14 grades were requested to participate in the study on a volunteer basis. Public Works, Capital Development Authority (CDA), Lahore Development Authority (LDA), Karachi Municipal Corporation (KMC), and Water are some examples. Sewerage Authority (WASA), Peshawar Development Authority (PDA), and Deputy Commissioner Offices of each city, as well as education offices, are also considered. This is because all of these public organizations are supposed to have direct contact with the people in order to solve the problems that they face. The researchers developed a structured questionnaire and the online survey was conducted using a questionnaire tool. When it comes to obstacles, a survey distributed by the government apparatus is broken down into the following six categories: Few of them include performance expectations, expectations on the amount of effort to be put forth, behavioral intention, social influence, enabling conditions, perceived organizational support, and behavioral intention. The challenges are given ratings ranging from "strongly agree" to "strongly disagree" on a 5-point Likert scale. Primary data was gathered from 470 respondents Initially, the questionnaire was distributed to 730 people by email, and out of those 730 people, only 470 people participated in the study and filled out the survey form as the primary data (470 Government officials; 102 from Islamabad City, 148 from Karachi city, 112 from Lahore City and 108 from Peshawar city) conducted by the researcher in Figure 2.

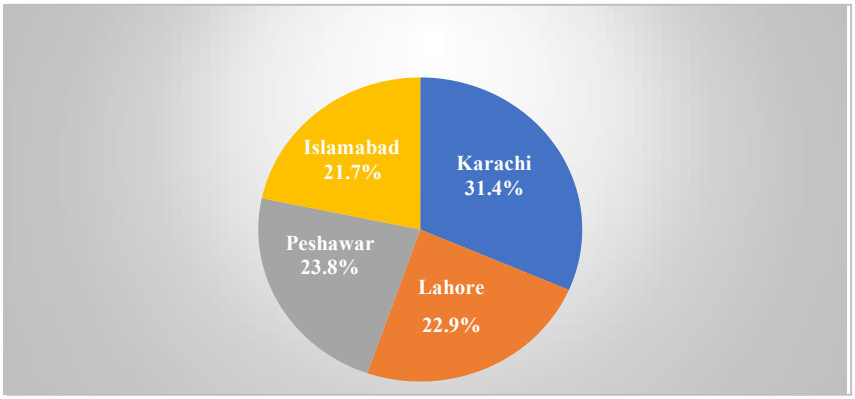


**Fig. 2:** Sample % from the selected cities of Pakistan.

### *3.3 Model framework*

The UTAUT model developed by Venkatesh et al., [61] was utilized in the ongoing research study; however, it was altered by the addition of a moderator that was referred to as "perceived organizational support." A moderator called "Perceived Organizational Support" is used to determine how much support an organization has for the NMTA. This moderator takes into account the company's perception of its support for the adoption of new media technologies (which includes performance expectancy, effort expectancy, social influence, and facilitating conditions). Table 1 represents the elements that influence the adoption of new media technologies in public organizations in Pakistan, which are taken from the suggested model.

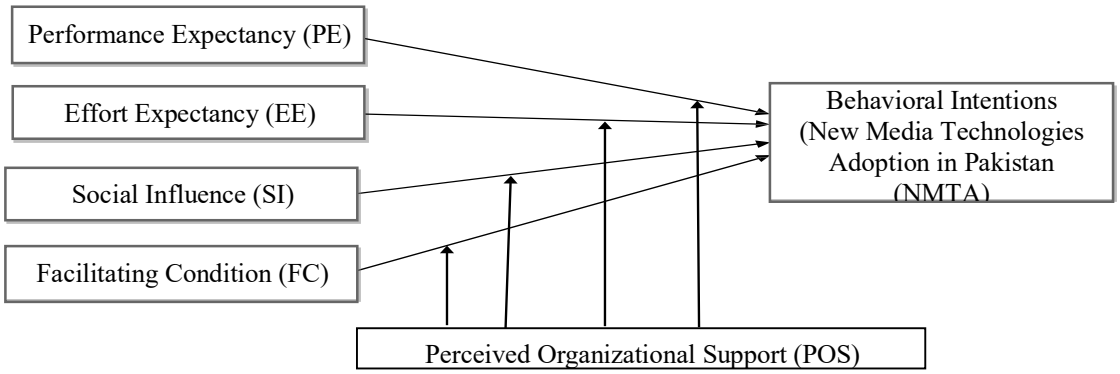


**Fig. 0:** Modified UTAUT Model Framework.

**Table 1.** Factor affecting new media technology adoption in Pakistan's selected cities

| Independent variables* | Moderator Variable | Dependent variable |
|---|---|---|
| 1. Performance Expectancy | Perceived Organizational Support | Behavioural Intentions (New Media Adoption by the Public Organization of Lahore, Karachi, Peshawar, and Islamabad city of Pakistan) |
| 2. Effort expectancy | | |
| 3. Social influence | | |
| 4. Facilitating conditions | | Intention to use new media Technology |

**Source:** Venkatesh et al., [59]

## 4 Results and major findings

The following subsections provide a more in-depth look at the findings and their implications.

*4.1 Reliability analysis:*

Cronbach alpha C, which ranges from 0 to 1, is used in reliability analysis to determine whether the questionnaire is reliable. If Cα is more significant than 0.9 considered Excellent, Cα=0.9>α≥0.8 is excellent, 0.8>α≥0.7 is satisfactory, 0.7>α≥0.6 is dubious, 0.6>α≥0.5 is subpar and 0.5>αis undesirable.

Table 2 shows the reliability analysis for the whole questionnaire. For the demographic variable, there are four questions Cα is 0.889, which is considered Good; performance Expectancy has four Elements with Cα is 0.957 is considered excellent. There are four components that make up social influence, the expectation of effort, and facilitating conditions. With Cα>0.9 considered Excellent. Perceived Organizational Support and Behavioral intention to use the new media technologies have 5 and 3 elements, with Cα>0.9 considered Excellent. The overall reliability of all questionnaires with 28 elements is excellent. H1: There is significant evidence that public sector organizations in Islamabad, Lahore, Karachi, and Peshawar support their employees to shift towards New Media Technologies to handle all public matters.

This study's initial null hypothesis examined the relationship between the city of work and perceived organizational support. Five questions were used in the investigation of the association. Due to the categorical nature of this data, the researcher utilized the Chi-Square test in order to investigate the association between the city of work and the feeling of being supported by the organization. The researcher also utilized the Pearson correlation in order to investigate the strength and direction of the connection that may be made between the location of one's place of employment and the feeling of being supported by their organization.

**Table 2.** Reliability Statistics.

| Variables | Elements | Cronbach alpha |
|---|---|---|
| Demographic Questions | 4 | 0.889 |
| Performance Expectancy | 4 | 0.957 |
| Effort expectancy | 4 | 0.987 |
| Social influence | 4 | 0.951 |
| Facilitating conditions | 4 | 0.956 |
| Perceived Organizational Support | 5 | 0.990 |
| Behavioural intention to use the New Media Technologies | 3 | 0.992 |
| Overall Reliability | 28 | 0.993 |

*4.2 Employment and perceived organizational support chi-square:*

The Chi-square test with an alpha of 0.05 was used to examine the association between the city in where an individual was employed and their level of perceived organizational support in Table 3. (POS). The chi-square value for the statement "The organization can help me when I have a problem" is 847.25, and its p-value is 0.05 or less, which indicates a significant effect. As a result, the null hypothesis must be rejected because the p-value is less than 0.05. Because there is not enough evidence to back up the null hypothesis, the alternative hypothesis was considered instead.

**Table 3:** Chi-square shows an association between the city of employment and Perceived Organizational Support.

| Variable* | Chi-Square | P-Value |
|---|---|---|
| Help is available from the organization when I have a problem. | 847.25 | < 0.05 |
| The organization cares about my general satisfaction at work. | 764.246 | < 0.05 |
| The organization takes pride in my accomplishments at work | 753.791 | < 0.05 |
| The organization would forgive an honest mistake on my part. | 730.255 | < 0.05 |
| The organization is willing to extend itself to help me perform my job to the best of my ability. | 788.615 | < 0.05 |

**Source:** Items and Scales adopted from Eisenberger et al., [62]

According to the test statistics value that was calculated from the chi-square of the second variable POS, "The organization cares about my general satisfaction at work," the value was 764.256, and it had a p-value that was less than 0.05, which is significant. Therefore, it is preferable to believe the alternative rather than the null. This is the conclusion that the researcher comes to due to the absence of evidence that would support the alternative hypothesis rather than the null hypothesis. The third POS variable, "The organization takes pleasure in my accomplishments at work," is significant with a chi-square value of 753.791 and a p-value of less than 0.05. This indicates that the researcher has no reason to accept the null hypothesis over the alternative, and the researcher therefore rejected the null hypothesis. One of the four POS variables, "The Company would pardon an honest error on my part," had a significant chi-square value of 730.225 and a p-value of less than 0.05, indicating that it was statistically significant. That the alternative hypothesis should be accepted in place of the null hypothesis is the strategy. The fourth POS variable, "The organization is willing to stretch itself to assist me perform my job to the best of my abilities," has a significant impact, with a chi-square value of 788.615 and a p-value that is less than 0.05. This indicates that the variable has a substantial influence. It suggests that the alternative hypothesis is the one that needs to be accepted rather than the null hypothesis.

### *4.2.1 Pearson correlation coefficient:*

The Pearson correlation between the perceived level of organizational support and the city of employment is presented in Table 4. The correlation coefficients between "Job employment city" and "Help is available from the organization when I have a problem" are 0.898, which indicates that there is a substantial link between the two variables. The correlation coefficient between job city location and the organization's concern for my total job happiness is 0.918, which indicates a strong and positive link between these two variables. Following that, there is a strong correlation between job city and "The organization takes pride in my accomplishments at work," with a value of 0.903, indicating that there is a positive relationship between the two variables. This is indicated by the fact that the correlation is positive.

The job city has a correlation of 0.915 with the fourth component of the POS, which is "The organization would pardon an honest mistake on my part." This indicates that there is a considerable and positive association between these two factors. The fourth POS variable, "The organization is willing to stretch itself to help me accomplish my job to the best of my abilities," has a correlation of 0.899 with Job City, which demonstrates that the two factors have a positive link.

**Table 4.** Correlations between the city of employment and Perceived Organizational Support*

| | In which City of Pakistan are you employed? | 1. Help is available from the organization when I have a problem. | 2. The organization cares about my general satisfaction at work. | 3. The organization takes pride in my accomplishments at work | 4. The organization would forgive an honest mistake on my part. | 5. The organization is willing to extend itself to help me perform my job to the best of my ability. |
|---|---|---|---|---|---|---|
| In which the City of Pakistan, you are employed? | 1 | .898** | .918** | .903** | .915** | .899** |
| | | .000 | .000 | .000 | .000 | .000 |
| 1. Help is available from the organization when I have a problem. | .898** | 1 | .910** | .952** | .908** | .962** |
| | .000 | | .000 | .000 | .000 | .000 |
| 2. The organization cares about my general satisfaction at work. | .918** | .910** | 1 | .963** | .985** | .948** |
| | .000 | .000 | | .000 | .000 | .000 |
| 3. The organization takes pride in my accomplishments at work | .903** | .952** | .963** | 1 | .962** | .987** |
| | .000 | .000 | .000 | | .000 | .000 |
| 4. The organization would forgive an honest mistake on my part. | .915** | .908** | .985** | .962** | 1 | .945** |
| | .000 | .000 | .000 | .000 | | .000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5. The organization is willing to extend itself to help me perform my job to the best of my ability. | .899** | .962** | .948** | .987** | .945** | 1 |
| | .000 | .000 | .000 | .000 | .000 | |

**Source:** Items and Scales adopted from Eisenberger et al., [62]

### *4.3 Organizational and management support to use new media technology:*

The data above indicates that public organizations in Pakistan's selected regions have good opinions about employing new media technologies. Five hundred and thirty-three percent of employees in the cities whose names were just listed think it is positive that their bosses are in favour of expanding the use of new media technologies in organizations that are run by the public sector. According to the findings of the poll, just 26 percent of employees working in public sector enterprises in the selected areas of Pakistan are against the organizations' plans to make use of media technology. According to the results, only 22 percent of employees remained neutral. It did not express any opinion in favor of or against the organization's intention to use new media technologies in the public sector (Figure 4).

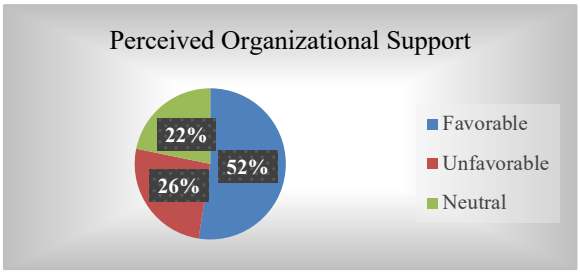


**Fig. 4:** Perceived Organizational Support.

The management of organizations in the public sector continually evaluates the efficiency with which their organizations utilize new media technology, such as social media, and makes adjustments as required. It has been estimated that around 59 percent of employees agree with top management's support for using new media technologies by employees to do everyday tasks. In contrast, 16 percent of employees disagreed with top-level support for adopting new media technology in public organizations. Similarly, 24% of employees in Pakistan's public sector organizations in Peshawar, Islamabad, Karachi, and Lahore did not respond to whether senior management supported using new media technology. The analysis is also presented in the below-given Figure 5.

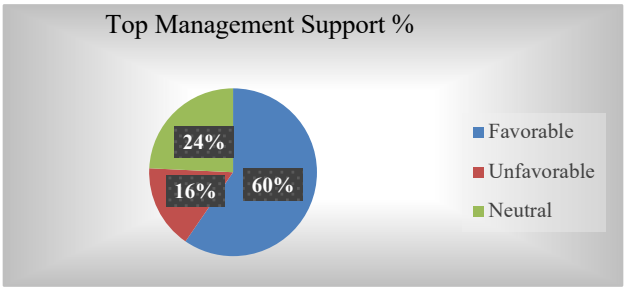


**Fig. 5:** Top Management Support to use New Media Technology.

H2: The employees of public sector organizations in Islamabad, Lahore, Karachi, and Peshawar are familiar with new media Technologies and have enough knowledge to use them for E-governance.

This is the second null hypothesis researchers used in this study. It was checked for the association between the city of employment and Behavioral attention to use the new media technologies, which consists of three questions. The researcher used the Chi-Square test because the data type is categorical here; this researcher investigates the significance between the city of employment and Behavioral attention to use the new media technologies. The researcher also examined the degree and direction of the association between the city of employment and perceived organizational support using the Pearson correlation in this case.

### *4.3.1 Chi-Square of employment and behavioral attention:*

Table 5 demonstrates, using a Chi-square test with an alpha of 0.05, the relationship between the city of employment and

behavioral attention to utilizing new media technologies. Because the Chi-square value for "I intend to use the system in the next few months" is 837.6 and the p-value is less than 0.05, which indicates that there is a significant effect, it is necessary to reject the null hypothesis at the level of significance known as alpha 0.05. Because there isn't enough evidence to back up the null hypothesis, the alternative hypothesis was considered instead.

**Table 5:** Chi-square shows an association between the city of employment and Behavioral attention to use the new media technologies.

| Variable* | Chi-Square | P-Value |
|---|---|---|
| I intend to use the system in the next few months. | 837.6 | < 0.05 |
| I predict I would use the system in the next few months. | 798.2 | < 0.05 |
| I plan to use the system in the next few months. | 807.066 | < 0.05 |

**Source:** Items and Scales adopted from Venkatesh et al., [59]

The researcher comes to the conclusion that there is insufficient evidence to accept the null hypothesis in place of the alternative, which means that the null hypothesis should be rejected, and the alternative hypothesis should be accepted instead. Test statistics value calculated from the chi-square of the second variable Behavioral attention to use the new media technologies is "I predict I would use the system in the next few months" is 798.2, with a p-value less than 0.05, which is significant. Since this value is significant, it means that the null hypothesis was rejected at the 0.05 level. The third variable of behavioral attention to use new media technologies, "I plan to use the system in the next few months," has a chi-square value of 807.76 and a p-value of less than 0.05, which is significant. This means that the researcher does not have evidence to accept the null hypothesis over the alternative, and the null hypothesis was rejected.

### *4.3.2 Pearson correlation coefficient:*

The Pearson Correlation between the City of Employment and Behavioral Attention to Use New Media Technologies is displayed in Table 6. The coefficient of correlation between "Job employment city" and "I wish to utilize the system in the next few months" is 0.915, which indicates that there is a robust and positive connection between these two aspects. There is a strong connection between the two criteria because the correlation between job city location and the statement "I anticipate using the system in the next months" is 0.914. The final variable, "I plan to use the system in the next several months," has a correlation of 0.916 with job city, which indicates that the association between the two variables is becoming stronger.

**Table 6:** Correlation between the city of employment and Behavioral attention to use the new media technologies*

| | In which City of Pakistan are you employed? | I intend to use the system in the next few months. | I predict I will use the system in the next few months. | I plan to use the system in the next few months. |
|---|---|---|---|---|
| In which the City of Pakistan, you are employed? | 1 | .915** | .914** | .916** |
| | | .000 | .000 | .000 |
| I intend to use the system in the next few months. | .915** | 1 | .968** | .972** |
| | .000 | | .000 | .000 |
| I predict I would use the system in the next few months. | .914** | .968** | 1 | .989** |
| | .000 | .000 | | .000 |
| I plan to use the system in the next few months. | .916** | .972** | .989** | 1 |
| | .000 | .000 | .000 | |

***Source:*** Items and Scales adopted from Venkatesh et al., [59]

### *4.4 Challenges towards new media technology adoption in Pakistan (Regional Perspective):*

The research has highlighted several barriers to using new media technologies in public sector organizations. Insufficient funding and technological know-how rank first and second in pressing issues, with technical and financial challenges coming in third. The widespread adoption of new media technologies faces a significant challenge in the form of

unstructured, bottom-up practice. As a result of a lack of training and comprehension in the application of new media technologies, employees in the public sector lack both the knowledge and skills necessary to operate effectively in this field. As a result of technical and financial difficulties, public organizations have been unable to accumulate sufficient capital. Forty-one percent of employees argued about lacking the necessary infrastructure and knowledge to adopt new media technology in public organizations. This indicated that almost half of the present staff didn't have training or new media technology-related education.

H3: The employees firmly believe that using new media technologies for governance can bring positive change and improve overall productivity.

This is the third null hypothesis researchers used in this study, and it has been checked for the association between the city of employment and Performance Expectancy, consisting of four questions. The Chi-Square test was used and investigates the significance between the city of employment and Performance Expectancy. The researcher also examined the intensity and direction of the association between the city of work and Performance Expectancy using the Pearson correlation.

### *4.5 Chi-Square of employment and performance expectancy:*

Table 7 demonstrates, using a chi-square test with an alpha of 0.05, the relationship between the city of employment and Performance Expectancy. If the effect is substantial, it is required to reject

Table 7 demonstrates, using a chi-square test with an alpha of 0.05, the relationship between the city of employment and Performance Expectancy. If the effect is substantial, it is required to reject the null hypothesis at a level of 0.05 significance. It has been determined that the statement "I would find the New Media Technologies useful in my employment" has a chi-square value of 847.25 and a p-value that is less than 0.05. Because there is not enough evidence to back up the null hypothesis, the alternative hypothesis was considered instead.

**Table 7:** Chi-square shows an association between the city of employment and Performance Expectancy*

| Variables | Chi-Square | P-Value |
|---|---|---|
| 1. I would find the New Media Technologies useful in my job | 847.25 | 0 |
| 2. Using the New Media Technologies enables me to accomplish tasks more quickly. | 764.246 | 0 |
| 3. Using the New Media Technologies increases my productivity. | 753.791 | 0 |
| 4. If I use the New Media Technologies, I will increase my chances of getting a raise | 788.615 | 0 |

***Source:*** Items and Scales adopted from Venkatesh et al., [59]

The researcher comes to the conclusion that there is insufficient evidence to accept the null hypothesis in place of the alternative, which means that the null hypothesis should be rejected, and the alternative hypothesis should be accepted instead. Test statistics value computed from the chi-square of the second variable Performance Expectancy is "Using the New Media Technologies enables me to perform things more rapidly." This value is 764.246, and its associated p-value is less than 0.05, which indicates that the result is significant. Notably, the third performance expectation variable, which asks respondents whether they believe that "Using the New Media Technologies Increases My Productivity," has a chi-square value of 753.791 and a p-value that is less than 0.05. This suggests that the null hypothesis should not be accepted as true because it is not supported by any evidence. The alternative was considered rather than the null hypothesis because there is not enough evidence to support the former. The last performance expectation variable, which states that "If I employ the New Media Technologies, I will boost my chances of getting a raise," has a value of 788.615 and a p-value that is less than 0.05, which indicates that it is significant.

### *4.5.1 Correlation of employment and performance expectancy:*

The Pearson Correlation between the City of Employment and Performance Expectancy is displayed in Table 8. It can be deduced from the fact that the value of the correlation coefficient between "Job employment city" and "I would find the New Media Technologies useful in my job" is 0.738 that there is a positive and robust connection between these two factors.

**Table 8:** Correlations between the city of employment and Performance Expectancy*

| | In which the City of Pakistan, you are employed? | 1. I would find the New Media Technologies useful in my job | 2. Using the New Media Technologies enables me to accomplish tasks more quickly. | 3. Using the New Media Technologies increases my productivity. | 4. If I use the New Media Technologies, I will increase my chances of getting a raise |
|---|---|---|---|---|---|
| In which City of Pakistan are you employed? | 1 | .738** | .745** | .685** | .892** |
| | | .000 | .000 | .000 | .000 |
| 1. I would find the New Media Technologies useful in my job | .738** | 1 | .957** | .934** | .807** |
| | .000 | | .000 | .000 | .000 |
| 2. Using the New Media Technologies enables me to accomplish tasks more quickly. | .745** | .957** | 1 | .952** | .852** |
| | .000 | .000 | | .000 | .000 |
| 3. Using the New Media Technologies increases my productivity. | .685** | .934** | .952** | 1 | .833** |
| | .000 | .000 | .000 | | .000 |
| 4. If I use the New Media Technologies, I will increase my chances of getting a raise | .892** | .807** | .852** | .833** | 1 |
| | .000 | .000 | .000 | .000 | |

**. Correlation is significant at the 0.01 level (2-tailed).

***Source:*** Items and Scales adopted from Venkatesh et al., [59]

The correlation between my job city and my ability to work more rapidly utilizing new media technologies is 0.745, indicating a good and favorable association between these two variables. Next, there is a significant correlation between job city and the statement "The organization takes pride in my accomplishments at work," with a value of 0.903, which demonstrates the connection between the two variables. This correlation is supported by the fact that the two variables share a common value. The fourth performance expectancy measure, "Using the New Media Technologies boosts my productivity," has a correlation with job city of 0.685, which indicates a strong and positive association between these two variables. The measure is "Using the New Media Technologies boosts my productivity." It is clear that there is a positive connection between these two factors because the final performance expectation variable, which reads "If I employ the New Media Technologies, I will enhance my chances of receiving a raise," has a correlation coefficient of 0.892 with the work city variable.

## *4.6 Employees productivity improvement:*

Figure 8 shows the outcomes of using new media technology in public sector enterprises based on an evaluation of the employees' opinions regarding their productivity. The use of new media technology helps public organizations cut expenses, such as administrative expenditures and printing costs, among other things. The employment of new media technologies in public organizations has aided in improving communication between the local community and the federal government. Overall, 87 percent of employees reported improved performance due to adopting new media technologies, which also helped them promote their present employment position.

H4: In Islamabad, Lahore, Karachi, and Peshawar, the senior management and organization support using new media technologies by providing the infrastructure needed to establish e-government.

The Chi-Square test was used and investigated the significance between the city of employment and Social Influence. Using the Pearson correlation in this particular investigation, the researcher looked at the strength and direction of the connection that exists between the location of one's place of employment and one's social impact.

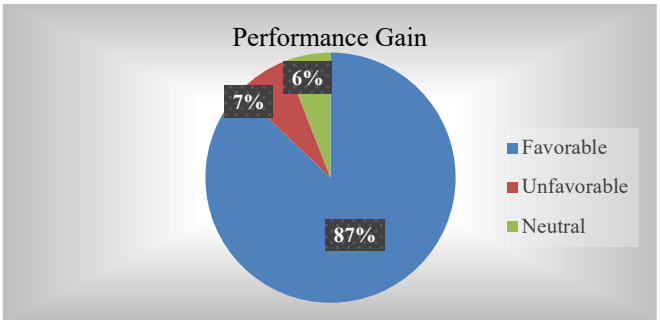


**Fig. 6:** Performance Improved with the Use of New Media Technology.

### *4.6.1 Chi-square of employment and social influence:*

Table 9 illustrates the association between the city in which one works and social impact by employing the Chi-square test with a significance level of 0.05. There is a significant effect, as evidenced by the Chi-square value of 753.712 and a p-value that is less than 0.05, which indicates that the effect is significant. People that affect my behavior believe that I should use new media technologies. It is inferred if significance level of 0.05 is used, it is required to reject the null hypothesis. Because there is not enough evidence to back up the null hypothesis, the alternative hypothesis was considered instead. The researcher comes to the conclusion that there is insufficient evidence to accept the null hypothesis in place of the alternative, which means that the null hypothesis should be rejected, and the alternative hypothesis should be accepted instead. The test statistics value for the second social influence, which is "People who are important to me think that I should use the New Media Technologies," was determined to be 7546.88, and its p-value was less than 0.05, indicating that it was significant. The third social influence variable, "The senior management of my office has helped use the New Media Technologies," is significant since its chi-square value is 635.52 and its p-value is less than 0.05. This means that the variable is statistically significant. This indicates that the researcher has no reason to accept the null hypothesis in favour of the alternative, and hence, the null hypothesis was rejected as a result. The last variable in the Social Influence category, which reads "In general, the organization has encouraged the use of New Media Technologies," has a p-value that is lower than 0.05, making it statistically significant. This indicates that the alternative hypothesis is favoured over the null hypothesis and that there is no evidence to support the null hypothesis. Additionally, the null hypothesis is not supported by any evidence.

**Table 9:** Chi square shows association between city of employment and Social Influence*

| Variable | Chi Square | P-Value |
|---|---|---|
| 1. People who influence my behavior think that I should use the New Media Technologies. | 753.712 | < 0.05 |
| 2. People who are important to me think that I should use the New Media Technologies. | 546.88 | < 0.05 |
| 3. The senior management of my office has been helpful in the use of the New Media Technologies. | 635.552 | < 0.05 |
| 4. In general, the organization has supported the use of New Media Technologies. | 820.615 | < 0.05 |

***Source:*** Items and Scales adopted from Venkatesh et al., [59].

### *4.6.2 Correlation of employment and social influence:*

Table 10 shows the Pearson Correlation between the City of employment and Social Influence. I am equipped with the necessary resources to make use of new media technologies. The link between the phrase "job employment city" and. The correlation between "I have the resources necessary to exploit the New Media Technologies" and 0.872 demonstrates that there is a strong and positive link between these two characteristics. The location of job cities and the correlation between them. The correlation coefficient between these two factors is 0.757, indicating that I possess the expertise required to use new media technologies. The New Media Technologies are incompatible with others I already use," and "Job City" has a strong positive correlation of 0.904, demonstrating the association between these two variables.

Job City's correlation with the fourth variable, Performance Expectancy The correlation coefficient between these two factors is 0.926, which is substantial and positive, indicating that a particular person (or group) is available for support with new learning issues.

**Table 10.** Correlation between the city of employment and Social Influence*

| | In which the City of Pakistan, you are employed? | 1. I have the resources necessary to use the New Media Technologies. | 2. I have the knowledge necessary to use New Media Technologies. | 3. The New Media Technologies are not compatible with others I already use. | 4. A specific person (or group) is available for assistance with new learning difficulties. |
|---|---|---|---|---|---|
| In which City of Pakistan are you employed? | 1 | .872** | .757** | .904** | .926** |
| | | .000 | .000 | .000 | .000 |
| 1. I have the resources necessary to use the New Media Technologies. | .872** | 1 | .911** | .839** | .896** |
| | .000 | | .000 | .000 | .000 |
| 2. I have the knowledge necessary to use New Media Technologies. | .757** | .911** | 1 | .722** | .813** |
| | .000 | .000 | | .000 | .000 |
| 3. The New Media Technologies are not compatible with others I already use. | .904** | .839** | .722** | 1 | .914** |
| | .000 | .000 | .000 | | .000 |
| 4. A specific person (or group) is available for assistance with new learning difficulties. | .926** | .896** | .813** | .914** | 1 |
| | .000 | .000 | .000 | .000 | |

**. Correlation is significant at the 0.01 level (2-tailed).
***Source:*** Items and Scales adopted from Venkatesh et al., [59]

## *4.7 A SWOT analysis of new media technology adoption in public organizations of Lahore, Karachi, Peshawar, and Islamabad (Pakistan's Cities):*

The most important takeaways from the SWOT analysis are outlined in the table that can be seen below: According to the findings, there are more advantages than disadvantages and more possibilities than dangers. From Table 11, it can be shown that new media technology is an excellent instrument for communicating between organizations and the general public since it facilitates the acquisition of knowledge on a given issue quickly and simply. On the other hand, some flaws and dangers are substantial because they relate to the inability to efficiently employ new media technologies and privacy restrictions with the threat of misused information.

H5: The relationship between New Media Technology Adoption, Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions will be moderated by Perceived Organizational Support (POS), and the positive relationship will be larger when Perceived Organizational Support is high. Related concepts include social influence, facilitating conditions, and social influence.

$$POS=\alpha+\beta 0 Performace\ Expectancy+\beta 1 Effort\ Expectancy+\beta 2 Social\ Influence+\beta 3\ Facilitating\ Conditions+\beta 4 Behavioral\ Conditions+\in \ldots\ldots (1)$$

**Table 11.** Result of SWOT analysis.

| | Internal Factors | External Factors |
|---|---|---|
| Favorable Factors | Strengths:<br>(i) Organizations and the general public benefit from using new media technology tools, which facilitate effective communication between them and promote transparent governance.<br>(ii) The use of new media technology makes it possible to obtain knowledge on a given subject more shortly and conveniently. | Opportunities: With the use of new media technologies, organizations may promote their services and collections to a large number of people in a short period, resulting in increased public interaction. |
| Unfavorable Factorss | Weaknesses:<br>The vast majority of government organizations and their workers lack the required infrastructure and ICT skills to function effectively. | Threats: It can cause heavy damage to the secret document, reputation and also, the wrong record can be added. |

**Table 12.** Coefficients.

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t-value | Sig. |
|---|---|---|---|---|---|---|
| | | β | Std. Error | β | | |
| 1 | (Constant) | -1.685 | .168 | | -10.029 | .000 |
| | Performance Expectancy | .113 | .047 | .062 | 2.391 | .017 |
| | effort Expectancy | -.380 | .037 | -.260 | -10.150 | .000 |
| | Social Influence | .548 | .151 | .387 | 3.632 | .000 |
| | Facilitating Conditions | .619 | .185 | .441 | 3.342 | .001 |
| | Behavioral intention | .788 | .116 | .341 | 6.813 | .000 |

Dependent Variable: perceived Organizational Support

$$POS=-1.685+\beta 00.113-\beta 10.380+\beta 20.548+\beta 30.619+\beta 40.788+\in \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Performance Expectancy shows a positive relationship with Perceived Organizational Support, which means if one unit of PE is increased, then POS will be increased by 0.113 units. However, it exhibits a negligible impact on the model with a p-value greater than 0.05. The relationship between effort expectation and point of sale is negative; if it increases EE by one unit, point of sale will fall by 0.380 units. Thus, EE has a considerable impact on the model. Social Influence has a favorable impact on the model, increasing POS by 0.548 units for every unit of SI increase. This has a big impact on the model. As the p-value is less than 0.05, Facilitating Conditions significantly impacts the model and positively correlates with POS. Lastly, Behavioral intention shows a positive relationship with POS, which means if one unit of Behavioral Intention is increased, POS will increase by 0.788 units. It shows a significant effect on the model. The number of 0.975 that is displayed in Table 13 reveals that the R square statistic, which indicates that the model is responsible for 97.5 percent of the variability, is accurate.

**Table 13.** Model Summary.

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .987[a] | .975 | .974 | 1.29738 |
| a. Predictors: (Constant), Behavioral intention, Performance Expectancy, effort Expectancy, Social Influence, Facilitating Conditions | | | | |

**Table 14**. ANNOVA.

| Model | | Sum of Squares | df | Mean Square | F value | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 29052.454 | 5 | 5810.491 | 3452.068 | .000b |
| | Residual | 755.753 | 449 | 1.683 | | |
| | Total | 29808.207 | 454 | | | |

a. Dependent Variable: perceived Organizational Support
b. Predictors: (Constant), Behavioral intention, Performance Expectancy, effort Expectancy, Social Influence, Facilitating Conditions

The regression has yielded a mean square value of 5819.491, whereas the residual has yielded a mean square value of 1.683. To determine the value of the F statistic, divide the mean square of the regression by the mean square of the residuals, which comes out to be 3452.068. At a significance level of 0.05, this difference can be considered statistically significant; however, the P value is lower than 0.05.

## *4.8 Performance Comparison among Cities (Lahore, Karachi, Islamabad, and Peshawar) Chi-Square Test*

Table 15 shows that 112 respondents were employed in Lahore, 56 respondents working on the 14 scales, 14 on the 15 scales, 42 on the 16 scales, and no respondent working on the 17 and 18 scales. Of the 108 respondents, 10 are working on a 16 scale and 98 respondents were on a 17 scale in Peshawar. Of 148 respondents, 76 and 72 worked on a 17 and 18 scale in Karachi. In Islamabad, all respondents worked on an 18 and above scale. The analysis shows that higher-scale employees who participated in the study were mostly from Karachi city and then from Islamabad city. It shows that Karachi City has vast employment opportunities.

**Table 15.** City of Pakistan respondents are employed and their designation in jobs.

| | | **Designation (Scale)** | | | | | Total |
|---|---|---|---|---|---|---|---|
| | | 14 Scale | 15 Scale | 16 Scale | 17 Scale | 18 or Above Scale | |
| In which City of Pakistan, you are employed? | Lahore | 56 | 14 | 42 | 0 | 0 | 112 |
| | Peshawar | 0 | 0 | 10 | 98 | 0 | 108 |
| | Karachi | 0 | 0 | 0 | 76 | 72 | 148 |
| | Islamabad | 0 | 0 | 0 | 0 | 102 | 102 |
| Total | | 56 | 14 | 52 | 174 | 174 | 470 |

**Table 16** Chi-Square Tests for Job designation and city of employment.

| | **Value** | **df** | **Asymp. Sig. (2-sided)** |
|---|---|---|---|
| Pearson Chi-Square | 690.225[a] | 12 | .000 |
| Likelihood Ratio | 767.259 | 12 | .000 |
| Linear-by-Linear Association | 338.086 | 1 | .000 |
| N of Valid Cases | 470 | | |

[a.] 4 cells (20.0%) have expected count less than 5. The minimum expected count is 3.04.

**Table 17.** City of Pakistan respondents are employed and their work experience in years.

| | | **Experience in Years** | | | | | **Total** |
|---|---|---|---|---|---|---|---|
| | | **1-5 years** | **5-10 years** | **10-15 years** | **15-20 years** | **Above 20 Years** | |
| | Lahore | 112 | 0 | 0 | 0 | 0 | 112 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| In which City of Pakistan, you are employed? | Peshawar | 100 | 8 | 0 | 0 | 0 | 108 |
| | Karachi | 0 | 82 | 66 | 0 | 0 | 148 |
| | Islamabad | 0 | 0 | 22 | 50 | 30 | 102 |
| Total | | 212 | 90 | 88 | 50 | 30 | 470 |

Table 17 shows that 112 respondents were employed in Lahore with 1 to 5 years of working experience. One hundred respondents have 1 to 5 years of work experience in Peshawar. Of 148 respondents, 82 and 66 have 5 to 10 and 10 to 15 years of work experience in Karachi. In Islamabad, 22 respondents have 10 to 15 years of work experience, 50 have 15 to 20 years, and 30 have more than 20 years of work experience.

**Table 18.** Chi-Square Test for City of Pakistan respondents are employed and their work experience in years.

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 775.097[a] | 12 | .000 |
| Likelihood Ratio | 846.437 | 12 | .000 |
| Linear-by-Linear Association | 365.040 | 1 | .000 |
| N of Valid Cases | 470 | | |
| [a.] 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.51. | | | |

It was found there is not a significant association between job designation and city of employment, thus it was concluded that the null hypothesis must be rejected. The value of the Pearson Chi-square statistic, which can be found above in Table 18, is calculated to be 775.097. The value of P is significantly lower than 0.05.

## 5 Theoretical and practical Implications

The empirical analysis of the adoption of new media technologies in public sector organizations in Pakistan has made significant theoretical and practical contributions to the existing body of research. On a theoretical level, this research contributes to the academic understanding of technology adoption within a specific cultural and organizational context. It builds upon prior theoretical frameworks by incorporating elements unique to the Pakistani public sector, thereby enriching the existing theoretical landscape. The study also sheds light on the role of cultural factors, institutional barriers, and leadership dynamics in shaping the adoption of new media technologies. Additionally, the study creates connections with earlier research both domestically and internationally on the adoption of technology in the public sector. It positions itself as an important piece in the worldwide technical advancements in public administration by making interconnections to the larger literature. This empirical analysis provides a basis for future investigations and policy initiatives that aim to support the effective integration of new media technologies in public sector organizations.

From a practical standpoint, the study offers valuable insights into the specific challenges and opportunities faced by public sector organizations in Pakistan when integrating new media technologies. Practical investigation involves assessing the actual usage patterns, user perceptions, and organizational readiness. Existing literature underscores the pivotal role of factors like perceived usefulness, ease of use, and top management support. Challenges, such as digital literacy gaps and infrastructure limitations, are highlighted [59,60,61]. By identifying these factors, the research provides actionable recommendations for policymakers, government officials, and organizational leaders to enhance the effective implementation of new media technologies in the public sector.

## 6 Limitations and future research

The biggest challenges, however, are a lack of resources, technological limitations, a lack of funding, and the use of unofficial, bottom-up methods. There are additional limitations associated with knowledge and expertise that must be considered. IT experts are crucial in getting people to use cutting-edge media tools through organizational activities. However, it has been discovered that most participants in public organizations do not have IT experts on their staff, causing a stumbling block in the transition to a digital Pakistan (e-government). As a result, public sector organizations are exposed to the danger of security breaches due to the abuse of information supplied to new media technology platforms. Therefore, new media technology platforms can use data provided in a harmful manner. Hence, the government should execute essential transactions online and invest more in educating the public on the benefits of digital technologies.

This method of obligatory digital transactions has the potential to advance understanding of emerging technologies and to put pressure on governments to allocate more resources and funds to improving the underlying infrastructure.

It is the first research focusing on how new media technology is used in Pakistan's four largest cities. According to this study, public sector workers in the targeted cities favor using new media technologies to carry out their daily tasks. The study also reveals that staff members think that new media technology will boost their output and governance. Additionally, it claims that public sector organizations in Pakistan's four cities lack the infrastructure needed to use new media technologies. The management of Pakistan's public sector enterprises would find this study useful as they use new media technologies to boost productivity and governance. Using the study, the researcher can extend their research about other cities in Pakistan to analyze the hurdles of using new media technologies at public sector organizations.

This is the first study focusing on adopting new media technologies in Pakistan's public sector organizations. The model used in this study is innovative, amended, and included a moderator. This study is also innovative as it focuses on new media technology, an important factor of the modern technological era. Moreover, as the study describes the importance of new media technology adoption in public sector organizations in Pakistan's regional perspective (Lahore, Islamabad, Karachi, and Peshawar), this study is innovative for the policymakers and for the public organization's management to shift towards technological era rather than the traditional method of administration.

## 7 Conclusions

The investigation discovers different outcomes that follow the previously established objectives by employing proper techniques. The following are the most significant findings from the current investigation, in order of importance. According to the results, majority participants believe that new media technology is beneficial in performing their tasks and has increased their productivity, and it has been found 88 percent of respondents shared a similar perspective and said that senior management and organizations are committed to increasing the use of new media technologies inside public organizations in the selected cities, as they consistently help citizens to identify and overcome the challenges they face in daily life. The findings were consistent with the assumptions regarding perceived expectations, performance expectations, and perceived organizational support. However, the findings demonstrated that 55% of public organizations use new media technologies and run their businesses using internet-based resources, which must be increased to provide the public with better services. This study looked into the aspects of new media technologies that influence the public sector communications. The study demonstrated how the popularity of new media technologies affects individuals' online activities, including their capacity to interact with one another and build communities. It follows that it makes sense to claim that user engagement is essential to efficient communication in the age of new media. This approach can be used by investigators in the future to study the mediating impact of digital media use. They might focus on the interactive element and produce more applicable, transportable results by conducting case studies.

***Conflicts of Interest Statement***

*The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.*

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