Bangladesh’s Experience With Social Media Adoption in Public Organizations

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ABSTRACT

The main purpose of this research is to find the effective strategies and factors of Bangladesh’s experience with social media adoption in public organizations through data from nationality representative surveys conducted on different city corporations in Bangladesh. A structured questionnaire method was conducted, and data were collected from 311 public organizations of different city corporations in Bangladesh. Technology acceptance, a multiple regression model, is estimated by the OLS method to find the significant factors of social media adoption in the public organization of Bangladesh. Moreover, the results of OLS estimation found that if the public organization of Bangladesh perceives that social media is a useful, improved, and easier tool to find information, the level of social media adoption will be increased, and if the service delivery system is improved by using social media, the level of social media adoption in the public organization of Bangladesh will be increased significantly.

KEYWORDS
Adoption, Bangladesh, Determinants, Public Organizations, Social Media

INTRODUCTION

Social media platforms transmit remarkable consequences in every sphere of human activities. Individuals have integrated themselves into this platform for social communication (Adolf and Deicke, 2015). All in all, relationships are now being replaced by social media networks which have become an easy medium for discussing moral and political ideas (Brady et al., 2017). With the adoption of social media, the traditional relationship between the government and citizens is being changed across the globe (Guzman, 2016). Public organization makes widespread use of social media without promoting. (Mathieson, 2014) Private organizations are more adaptive than public organizations with the increasing level of technology over time. Most management of the public-organization are inactive with the latest technology to address upcoming problems (Serrat, 2017). They often face daunting tasks of meeting the growing client demand of gaining accessibility and comprehend information. As per to the indication of EMC Corporation (2010) that public organization management can adopt digital channels such as social media to get better, faster, and more assured communications. Social media have changed the process of governance and have ben governing throughout the world and
those platforms offer government agencies new opportunities to improve the quality and efficiency of their interactions with constituents (Falco, 2011).

With the availability of modern information and communication technologies, there is an unprecedented opulence and flow of information among the mass people in Bangladesh. Even though, a developing country, Bangladesh has already taken up the initiative to use social media to accelerate the national decision-making process and enhance the performance of government officials at all levels, increase the involvement of the public in various activities (Azad, 2017). This will lead Bangladesh to a more responsible government in providing fundamental privileges to the general public. Thus, public organizations are getting used to the new tools of information technology, which is very relevant to ordinary citizens. It allows ordinary people to interact with the government at various levels on matters of governance to provide inputs for decision-makers (a2i, 2018). In addition to internet-based interaction between government and citizens, web 2.0 based social media platforms like, wiki, blogs, Facebook, Twitter, you-tube, etc. are providing broader connection facilities (Chun et. al. 2010; Hand & Ching, 2011; Nam, 2012). Eventually, citizens are now better connected to the government in terms of information, community collaboration, and finding rapid solutions in an emergency (Lee & Kwak, 2012).

LITERATURE REVIEW

Social Media

The media which allow creating, storing, transmitting of human knowledge and experiences, and engaging with multiple forms of sociality on cyberspace in social and cultural contexts can be considered as social media (Wittel, 2001). Mostly internet-based social media is a platform for sharing and discussing information with the users and it is the combination of software tools and technologies, online spaces, social interaction, and the creation of multiple forms of texts such as words sound pictures, and pictures that are published and shared in an online social environment. The study of social media requires a clear understanding of some terms related to society, sociality, media, information, communication, interaction, participation, private and public sphere, culture, community (Ellison & Boyd 2013). The forms of sociality include information, cognition, communication, interaction, participation, community, cooperation, and collaborative works (Fuchs, 2014). Facebook is considered as a social media as it contains a lot of information, allowing people to form groups, communities, create shared meanings and collaborate to achieve certain goals which has 2.27 billion users. Moreover, Facebook is on the top of the most popular social media platforms around the world, followed by YouTube (1.9 billion), WhatsApp (1.5 billion users), Facebook Messenger (1.3 billion users), WeChat (1.08 billion users), Instagram (1 billion users), QQ (803 million users), QZone (531 million users), Douyin/Tik Tok (500 million users) and Sino Weibo (446 million users).

Graham (2014) explored the use and perceptions of social media as a communication tool with data collected from interviews with public information officers in local governments and he argued that various social media platforms can be beneficial as a tool for communication with local governments. By analyzing 119 Italian municipalities in Italy, Agostino and Deborah (2013) argued that YouTube can be useful for supporting public communication while Facebook can enhance public participation. The adoption and application of social in public agencies are highly influenced by officials concerned of the organizations. Multiple factors influence the use and adoption of social media in government organizations. Al Riyami and Ashrafi (2016) identified 20 factors that are important for social media adoption by using Analytic Hierarchy Process (AHP) method in ranking the factors and they argued that some factors such as Social Media Strategy, Training and experience of Staff, Community Influence, and Top Management Support are more important in developing countries when compared them with the developed countries. Meanwhile, Guillamón et al.(2016) disclose that level of e-participation, population size, citizens’ income level, and level of indebtedness influence
social media use in local governments in Italy and Spain while Picazo-Vela, Gutiérrez-Martínez & Luna-Reyes, (2018) investigated the perceptions of risks, benefits, and strategic guidelines about social media applications in Mexico. They interviewed 250 public servants of the country and from the analysis of data, they concluded that the usage and application of social media at public agencies may improve communication, participation in governance and ensure more transparency in public service delivery of the government-citizen. The adoption and use of social media local government agencies is considered as a strong tool for detecting, evaluating, managing, and communicating a crisis (Bennett & Manoharan, 2016; Taekke, 2017; Graham et. al, 2015; Jin, Liu & Austin, 2014). In a study, Graham et. al (2015) have shown that there is a positive relationship between social media use and the ability to control a crisis official of local government officials. The level of social media has an impact on crisis from the data of 300 local government officials from municipalities across the United States. Interestingly, results show that local city officials used social media more during public health crises than for natural disasters, transportation, political, social, or criminal crises. Also it revealed that more city officials used social media tools more than their ability to control a crisis as well as their overall evaluations of the strength of their responses is increased. Meanwhile, the users’ perceptions in local government organizations about the benefits of social media (Sharif et al., 2016) may influence the use of social media applications in organizations.

Earlier Research on Social Media Adoption

Very few studies have investigated the factors leading to the acceptance or rejection of new technology in public organizations in Bangladesh. Kamruzzaman et al., (2018) have investigated that the social media use among agricultural workers at the Department of Agricultural Extension (DAE) in Bangladesh. They perceived ease of use, usefulness are the most influential factors that determine DAE staff acceptance of social media for performing professional functions. The DAE official perceived social media as a tool for improving professional performance, such as disseminating agricultural information; garnering support for new agricultural policy; networking with clients and colleagues while enabling coordination of services provided by colleagues. There are 20 factors that influence social media adoptions in public organizations; support from top management, training, experience, and staff resources, perceived risk, financial and technical resources, relative advantage, community influence, social media strategy and policies, compatibility, centralization, organizational innovativeness, the complexity of social media, costs, autonomy, bandwagon effect, formalized culture, self-efficacy, time resources, performance expectancy, job satisfaction, and social influence (Al Riyami & Ashrafi, 2016).

It was found out the adoption models are rooted in a variety of theories including: Technology Acceptance Model (TAM), Theory of Planned Behavior, Diffusion of Innovation theory, Theory of Reasoned Action, Unified Theory of Acceptance and Use of Technology, Social Cognitive Theory, Uses and Gratification Theory. According to the theories and models, multiple factors impact on to the adoption, use, acceptance of new technologies. The factors include attitudes, social norms and intention, availability of resources, opportunities and skills, perceived significances of the resources, perceived usefulness, perceived ease of use, and attitude toward use, social influence result demonstrability, job relevance, and output quality; motivations, behavioral usage and gratifications/satisfaction (Taherdoost, 2018; Al-Tarawneh, 2019).

The new information and communication technologies, there is an unprecedented opulence and flow of information among the mass people in Bangladesh. This leads Bangladesh government to a more responsible in providing fundamental privileges to the general people. As a result, Bangladesh too, as a developing country, has taken up the initiative to use this component of ICT to enhance the performance of government officials at all levels, increase the involvement of the public in various activities (Azad, 2017). Therefore, they are getting used to the new tools of information technology with ordinary citizens. It allows ordinary people to interact with the government at various levels on matters of governance to provide inputs for decision-makers (a2i, 2018).
THEORETICAL MODEL

Availability, intention and behavior of using technology is inevitable for successful implementation of social media in organizational activities and also depends on the availability of modern technology. The issues of technology acceptance, actual utilization and their mutual relationship have been researched from multiple theoretical perspectives. In this respect, the notable models are Technology Acceptance Model (TAM) by Davis (1989), Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB). Technology acceptance can be described as the approval, favorable reception and ongoing use of newly introduced devices and systems (Umranil, Ghadially, 2008). There are four main concepts, such as performance expectancy, effort expectancy, social influence and facilitating conditions. These constructs have direct influence on intention and actual usage behavior (Venkatesh et. al., 2003). However, the present study follows the theory underlined by Technology Acceptance Model proposed by Davis (1989). The TAM, introduced by Davis (1989), is an adaptation of social psychology theory of reasoned action, specifically adapted for modeling user acceptance of information systems. The TAM shows a systematic and fundamental relationships among system designed features, perceived usefulness and ease to use, attitude towards and intentions to use and thereby recommends actual usage.

TAM assumes that beliefs or attitudes about perceived usefulness (PU) determine intention to use (IU) the technology which, then, leads to actual usage (Davis, 1989; Venktatesh and Davis, 2000). For our current study on social media, the study operationalizes IU as the continued intention to perform social media-related activities using the social media site (Fishbein and Ajzen, 1975). Further, the study defines actual use (AU) in terms of the frequency of social media used by the user. The TAM model based the relationship of PU, IU, and AU from the TRA model (Ajzen and Fishbein, 1980). Based on the TRA, we argue that a social media user’s behavior to use social media is determined by their intention to perform the behavior and that this intention is, in turn, a function of his/her perceived benefit from the social media. “Intention reflects a decision that the person has made about whether to perform a behavior or not, and as such gets formed through a process of mental deliberation, conflict, and commitment that may span a significant time period” (Davis, 1986). Therefore, intention indicates a more stable mental status of a user regarding usage behavior of social media. Davis (1989) suggested revising the original TAM by removing the “attitude” construct, and the study results supported that the revised TAM model was a powerful model for predicting and explaining user behavior on only three theoretical constructs of ease of use (EU), PU, and IU. Such simplification of the theoretical framework of the TAM model for behavioral beliefs and behavior intention has become common in researches (Davis et al., 1992; Klobas, 1995; Venktatesh and Davis, 2000; Venkatesh et al., 2002; Thong et al., 2002; Lee et al., 2007; etc.).

The following model is a generalized form where actual usage or adoption of social media is determined by the intention to use of social media.

The research model in Figure 1 is adopted and revised from the mature Technology Acceptance Model (TAM) proposed by Davis (1989) to investigate the factors affecting social media adoption in the context of Bangladesh although it is rigorously proposed and investigated in prior literature for technology adoption. This is a well-known model of econometric analysis but a new technique in the discipline of communication studies.

Thus, the theoretical contribution is to testify the model for social media adoption in the context of Bangladesh. So, to prove the specialty, the researcher translates the model into a multiple regression model.
MATERIALS AND METHODS

Research Approach

This study applied the mixed approach and the social media practitioners from randomly selected government or public organizations in Bangladesh. The study used simple statistical tools like, mean, median, mode, frequency, percentage, etc. and study considers a sequential exploratory study (Creswell, 2009). Finally, to determine the factors of social media adoption, this study estimates a multiple regression model by OLS technique reflecting the relationship between five broad category factors of two mediating factors (intention to use and attitude toward using social media) and social media adoption in public organizations of Bangladesh.

Sources of Data

Though interviews primary data were collected from the government or public organizations situated in city corporation areas of Bangladesh. The reasons behind choosing city corporation areas as the sample units as they concentrated, diversified types of government organizations are trying to provide online services to their customers. The social media practitioners of those randomly selected public organizations were interviewed by face-to-face conversation using a well-designed question schedule. The interview schedule was prepared based on research questions in order to achieve the objectives.
A pilot survey was initiated in order to test the accuracy of the questionnaire about the usage behavior of social media at the organizational level in Bangladesh.

**Sampling Design**

Probability sampling was done in collecting primary data from the government offices in the city corporation areas of Bangladesh. Multi-stage simple random sampling technique was done for selecting the government offices. Firstly, Bangladesh was divided into different city corporations and twelve city corporations in Bangladesh were selected for study. Secondly, 311 public organizations were chosen from those four randomly selected city corporations. Finally, primary data were collected from the concern officers from the information desk or relationship officers of those randomly selected government organizations located in these four city corporation areas in Bangladesh.

**Models of Factors influencing Social Media Adoption in Public Organizations in Bangladesh**

Social networking technologies have attracted hundreds of millions of users of different ages, gender, culture, language, educational qualifications, or social status to build social networks, communicate and interact with each other for mutual assistance through the past years, which is of paramount importance for identifying the human behavior and relationship patterns in different platforms. Currently, social media and communication technology have become ubiquitous and are reshaping almost every facet of human life in an unprecedented manner, and the education sector is no exception. In measuring the factors affecting social media adoption in public organizations of Bangladesh, the following model is proposed (Table 1).

![Table 1. Proposed Model of Analyzing the Factors Affecting Social Media Adoption in Public Organization of Bangladesh](image)

Before conducting regression analysis, it is important to measure the identified variables in the proposed model. As seen in Table 4.1, the proposed model shows that intention of attitude toward using social media in public organizations are two mediating factors of social media. In estimating the multiple regression model, the five independent variables are disaggregated by different questions to the respondents, and the answers of the respective questions are thereby coded by using a 5-point Likert scale.

The intention to use social media in public organization is defined as a dummy variable measured by asking “whether the organizations are intended to use social media in their service delivery system or not” whereas the attitude toward using social media is also defined as a dummy variable measured by asking “whether there exists positive or negative attitude of top management toward using social media”.

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**Table 1. Proposed Model of Analyzing the Factors Affecting Social Media Adoption in Public Organization of Bangladesh**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Mediator Variables</th>
<th>Dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived benefits</td>
<td>Attitude towards Social Media</td>
<td>Social Media Adoption by the Public Organization of Bangladesh</td>
</tr>
<tr>
<td>Perceived risks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance Expectancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DATA ANALYSIS

The Characteristics of the Surveyed Public Organizations

Public organizations in Bangladesh are often referred to as state sector, government-owned undertakings/enterprises, or state-owned enterprises and they are formed under the legal proceedings, wholly or partly owned and controlled by the government and produce marketable goods and services, have an explicit or extractable budget, and are supposed to finance their operating costs from their resources (Banglapedia). However, local governments play a vital role in providing public services such as education, health, and basic infrastructure (Kurata and Arimoto, 2018). The research surveyed different public organizations and this included diversified organizations. The surveyed organizations are scattered and so far there exist no integrated services, leading to redundant works for most government information systems. The identified services are outlined in the following table.

Training and Experience on Using Social Media

Table 5 shows the training and experience of using social media. It is observed in Table-5 that the various public organization receive adaption of social media by 62% and the rest of the organizations don't receive this type of training. And it is Observed that 95% organization has not received the IT management training and the amount of taking this training is only 10%. Table-5.2 also shows the duration of taking experience. The table reveals that 47% organization has the IT works experience under less than one year. And only 6% organization has more than three or more.

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Measures</th>
<th>Expected Effects on Social Media Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Media Adoption</td>
<td>Combined Social Media Score</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Measures</th>
<th>Expected Effects on Social Media Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived usefulness</td>
<td>PU_1= social media makes it easier to find information. PU_2= social media improves my information-seeking. PU_3= social media helps me to find information more quickly. PU_4= I find social media useful in my information seeking.</td>
<td>+</td>
</tr>
<tr>
<td>Perceived risks</td>
<td>Organizations face high risks of misusing shared information in social media</td>
<td>-</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>PEOU_1= My interaction with social media is clear and understandable. PEOU_2= Interacting with social media does not require a lot of my mental effort. PEOU_3= It was easy for me to become skillful in using social media. PEOU_4= I find social media to be easy to use. PEOU_5= I find it easy to get social media to do what I want it to do.</td>
<td>+</td>
</tr>
<tr>
<td>Performance Expectancy</td>
<td>The service delivery system is improved by using social media</td>
<td>+</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>Customers think that social media is a feasible medium in their practical lives</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mediator Variables</th>
<th>Measures</th>
<th>Expected Effects on Social Media Adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards Social Media</td>
<td>Dummy: 1 if the organizations are intended to use social media in their service delivery system and 0 otherwise</td>
<td>+</td>
</tr>
<tr>
<td>Intention to Use Social Media</td>
<td>Dummy: 1 if there exists positive attitude of top management toward using social media and 0 otherwise</td>
<td>+</td>
</tr>
</tbody>
</table>
Table 3. Identified Services Provided by Surveyed Public Organizations

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Service Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural development</td>
<td>Defense</td>
</tr>
<tr>
<td>Registration/certification</td>
<td>Taxation</td>
</tr>
<tr>
<td>Education</td>
<td>Public procurement</td>
</tr>
<tr>
<td>Social Awareness</td>
<td>Transportation</td>
</tr>
<tr>
<td>Health</td>
<td>Utility services</td>
</tr>
<tr>
<td>ICT Training</td>
<td>Water supply and sanitation</td>
</tr>
<tr>
<td>Passport</td>
<td>Audit and Monitoring</td>
</tr>
</tbody>
</table>

Table 4. Training and experience on using social media

<table>
<thead>
<tr>
<th>Types of Training</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>Years of Experience</th>
<th>Yes (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation of social media</td>
<td>62</td>
<td>38</td>
<td>Less than 1 year</td>
<td>47</td>
</tr>
<tr>
<td>Privacy and security issues</td>
<td>10</td>
<td>90</td>
<td>1-2 years</td>
<td>32</td>
</tr>
<tr>
<td>IT management</td>
<td>5</td>
<td>95</td>
<td>2-3 years</td>
<td>15</td>
</tr>
<tr>
<td>Data literacy</td>
<td>12</td>
<td>88</td>
<td>3 or more years</td>
<td>6</td>
</tr>
</tbody>
</table>

Outcomes of Social Media Usage in Public Organization of Bangladesh

Figure 2. Percentage of Responses about the Impacts of Social Media Adoption

- The use of social media has resulted in overall productivity improvement (e.g., public relations)
- The use of social media has resulted in reduced in staff costs
Level of Social Media Adoption by the Public Organizations

The study followed Lee and Kwak Model (2012), namely the Open Government Maturity Model (OGMM) which identifies four categories or levels such as, no social media use, emerging social media use, advanced social media use, and collaborative social media use. Thus, during data collection respondents were asked to respond to one of the four questions about no social media use, emerging social media use, advanced social media use, and collaborative social media use. Levels of social media used were examined by the individual organization and combined organizations. A descriptive analysis of the combined organizations show that overall 77% of the respondents are using some form of social media in their organization. When broken into levels of use, 49.75% are using social media at the emerging level, 7.25% are using social media at the advanced level, and 20% are using social media at the collaborative level. When separated into different city corporations, Dhaka south and north city corporations both have the highest overall level of social media use at 85%, Rajshahi city corporation has the least amount of overall social media use at 78%, and Khulna city is in the level at 78% social media use.

<table>
<thead>
<tr>
<th>Levels of Adoption</th>
<th>Dhaka South</th>
<th>Dhaka North</th>
<th>Khulna</th>
<th>Rajshahi</th>
<th>Total Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>No social media use</td>
<td>15%</td>
<td>15%</td>
<td>22%</td>
<td>40%</td>
<td>23%</td>
</tr>
<tr>
<td>Emerging Social Media Use</td>
<td>45%</td>
<td>36%</td>
<td>67%</td>
<td>51%</td>
<td>49.75%</td>
</tr>
<tr>
<td>Advanced Social Media Use</td>
<td>8%</td>
<td>14%</td>
<td>3%</td>
<td>4%</td>
<td>7.25%</td>
</tr>
<tr>
<td>Collaborative Social Media Use</td>
<td>32%</td>
<td>35%</td>
<td>8%</td>
<td>5%</td>
<td>20%</td>
</tr>
<tr>
<td>Combined Social Media Use</td>
<td>85%</td>
<td>85%</td>
<td>78%</td>
<td>60%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Calculated from Field Survey, 2019

The Factors Affecting Social Media Adoption in Public Organization of Bangladesh

Firstly, this Section applies one-way ANOVA to show the relationships between the four perceived influential categories and levels of social media use. The second step uses the results from the first step to determine whether or not the five departmental environments, as proposed, are likely to result in one of the four levels of social media adoption.

The Relationships between the Perceived Influential Categories and Levels of Social Media Use

Perceived political trust, perceived organizational culture, perceived administrator preconceptions, and perceived public influence are the four main constructs used in this research after scoring social media use (SMU), the second step was to analyze each of the four proposed environmental influences to verify whether they have an impact on the levels of social media use. One-way ANOVA analyses was used to examine the relationships between the perceived influential among the four categories of responses and the levels of social media use. The following table describes the outputs of one-way ANOVA analysis.
The Factors Influencing Social Media Adoption in Public Organization of Bangladesh

The multiple regression model was estimated along with the OLS method in order to determine the factors affecting social media adoption in the public organization of Bangladesh. In doing OLS estimation, it was assumed that the level of social media adoption, measured in combined social media use, is a linear function of a set of 7 different factors or specific characteristics. These results are presented in Table 8.

Table 6. Results of one-way ANOVA Analysis to find out the Impact of perceived Influential Categories on Social Media Use

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>Findings</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>A public organization with a higher perception of political trust should lead to higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between political trust and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who perceives a more decentralized organizational culture should show higher levels of social media adoption.</td>
<td>Rejected</td>
<td>There is no significant relationship between the decentralized organizational culture and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who perceives higher organizational resources should show higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between the organizational resources and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who has a higher faith in technology should show higher levels of social media adoption.</td>
<td>Rejected</td>
<td>There is no significant relationship between faith in technology and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who perceives higher organizational resources should show higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between the organizational resources and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who has a higher faith in technology should show higher levels of social media adoption.</td>
<td>Rejected</td>
<td>There is a significant positive relationship between faith in technology and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who has higher willingness to engage citizens in the participation process should show higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between the willingness to engage citizens in the participation process and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who has higher willingness to engage citizens in the participation process should show higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between the willingness to engage citizens in the participation process and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who has higher willingness to engage citizens in the participation process should show higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between the willingness to engage citizens in the participation process and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who has had good prior engagements with citizens should show higher levels of social media adoption.</td>
<td>Rejected</td>
<td>There is no significant relationship between a good prior engagement with citizens and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who perceives citizens as having the knowledge to engage in the deliberative process should show higher levels of social media adoption.</td>
<td>Rejected</td>
<td>There is no significant relationship between the knowledge to engage in the deliberative process and the levels of social media adoption.</td>
</tr>
<tr>
<td>A public organization with a manager who is highly influenced by the public/media should show higher levels of social media adoption.</td>
<td>Accepted</td>
<td>There is a significant positive relationship between the influential public/media user and the levels of social media adoption.</td>
</tr>
</tbody>
</table>
The OLS estimation results provided in Table 7 shows that about 87% of the variations in the dependent variable are explained by the variation in the explanatory variables incorporated in the model, which is shown by the value of R-square. The overall significance and fitness of the model were checked with the F value, accordingly, (Prob.>F = 0.0000) which indicates that the independent variables reliably predicted the dependent variable. Initially, results of the model revealed that there was the problem of heteroscedasticity. However, robust action was taken to remedy the problem. Moreover, the VIF test were performed to see if the model suffers from the problem of multicollinearity and incorrect specification. These tests show that the model was free from such problems.

According to Table 7, three representative questions of perceived usefulness and two representative questions of perceived ease of use with performance expectancy factors have a statistically significant relationship with the dependent variable. These are PU_1= social media makes it easier to find information, PU_2= social media improves my information-seeking, PU_4= I find social media useful in my information seeking, PEOU_1= my interaction with social media is clear and understandable, PEOU_4= I find social media to be easy to use and
Performance expectancy. All these variables exhibit hypothesized signs and significant at level 1%. The explanation of the significant factors of social media identified in OLS estimation results is presented in the following subsections.

**Perceived Usefulness**

Perceived usefulness is a significant factor that has a positive impact on social media adoption in the public organization of Bangladesh. This factor is measured by observing the answers to four basic questions. The respondents’ responses are depicted in the following figure.

Figure 3 shows that most of the respondent organizations think that social media has significant benefits in finding information. The estimated results in Table 5 indicate that if the public organization of Bangladesh perceives that social media is a useful, improved and easier tool to find information, the level of social media adoption will be increased. This result is in line with the findings of Sharif et al. (2015). They found that perceived usefulness has a positive impact on management drive with social media adoption across local governments in Australia.

Although the factors perceived risk are not significant, they have negative impact on the social media adoption in public organizations in Bangladesh like the study of Sharif et al. (2015).

**Perceived Ease of Use**

Results presented in Table 8 show that if public organization perceives that social media is clear, understandable and easy to use, the level of social media adoption will be increased significantly. That is, perceived ease of use is a positive and significant factor of social media adoption in public organizations of Bangladesh. This finding of relative advantages and its easiness to handle is the same as the findings of Araújo et al. (2016) and Riyami and Ashrafi (2016), but the study of Araújo et al. (2016 was on the analysis of the factors that lead companies to adopt social media. The following figure shows the distribution of respondents’ responses regarding five basic questions.
Performance Expectancy

Performance expectancy is one of the significant and positive factors of social media adoption in public organizations in Bangladesh. Alraja et al. (2016), Kurfah et al. (2017), However, Rodrigues et al. (2016), and Zawaideh (2016) found the same findings but inconsistent with the result findings of Mensah (2019). The results of OLS estimation obtained by the service delivery system using social media along with the level of social media adoption in public organizations of Bangladesh will be increased significantly. Performance expectancy, according to Venkatesh et al. (2003), is the perception of the user that the use of particular technology will assist or enable him or her to accomplish a particular job performance. It has been established that performance expectancy is a determinant of the intention in using technology-related applications (Davis, 1989; Venkatesh et al., 2003). It is obtained that 97% organizations think that their service delivery system has been improved after using social media (Figure 6).
Effort Expectancy

The effort expectancy is positively related to the social media adoption in public organizations of Bangladesh. That is, if the customers of a certain organization think that social media is a feasible medium in their practical lives, they will adopt social media in their service delivery system as it is useful. This result is in line with the findings of Alraja et al. (2016) However, defers from the findings of Mensah (2019). The perception and feelings of Citizens about the use of e-government do not require much effort would be attracted to use e-government services. Moreover, earlier studies found that effort expectancy is a strong predictor of the intention to adopt and use e-government services (Kurfalı et al., 2017; Lu and Nguyen, 2016; Rodrigues et al., 2016; Zawaideh, 2016). But the factor is appeared as insignificant in OLS estimation because most of the respondents of different surveyed organizations think that customers are yet not willing to interact through online platforms (Figure 2).
EMPIRICAL IMPLICATION

The results of the study have important implications for many stakeholders including public-private sector policymakers, social media and communication strategies, and political parties in the context of a developing country like Bangladesh. The results of the study will be used for the development of various government departments, agencies, planners, and enhancing policy-makers to address the future challenges for e-government applications and service delivery in Bangladesh. If these recommendations are implemented, the government would highly be benefitted the cyber relationship between the government and the public.

FUTURE RESEARCH

Future studies should focus on investigating the impact of social media adoption in government organizations in Bangladesh; factors influencing citizen’s expectations about social media communication by the government agencies; technological administrative risks and threats of adopting social media platforms in government organizations.

RECOMMENDATIONS

The research recommends that the government should develop a social media strategy in keeping with the following issues: organizational objectives and goals, target audience, allocation of adequate resources including personnel and facilities, feedback and content moderation policy, and privacy and security of issues.

- This research recommends public organizations including government departments and agencies should assign dedicated social media desks under the public relations department.
- The study recommends that the government should incorporate social media issues in the professional training of civil officials in order to ensure responsible and professional use of the platforms.
- This study recommends that the government should build an appropriate strategy, policy, and mechanism to monitor the social media activities by government departments and agencies.
- This research recommends that the government should recruit professional communication experts at its different departments and agencies. The recruitment may be through Bangladesh Civil Service’s information cadre or graduates in journalism, communication, and media studies.
- This research recommends that the government should take necessary steps to change government agencies’ management attitude toward the use of social media platforms, and engagement and feedback to the citizens.

CONCLUSION

Social media offer the governments a new approach to improve transparency and accountability, involving increasingly citizens to participate and collaborate in decision making to improve information management and access as public service. This study contributes to the better understanding of tools used in social media in order to increase the level of governments’ social media adoption while providing gauging insights about the digital integration of social media links and actual presence on social media. The adoption of social media applications in government organizations is still at an early stage in Bangladesh. The public sector of Bangladesh is trying to apply social media platforms for service delivery system. Facebook is the mostly used social media by different organizations. The focuses of social media communication of the organizations are on information dissemination and
connection. Most organizations do not have a clearly outlined social media strategy. However, public organizations have favorable attitudes on social media adoption. Most of the respondents agreed that the organizations are getting lucrative benefits from using social media. There is a positive trend towards attending meetings in public organizations done using social media. Although political trust and levels of social media are positively related, there is no significant relationship between the decentralized organizational culture and the levels of social media adoption in public organizations in Bangladesh. Moreover, resources, faith in technology along with more innovative management may help to increase the levels of social media adoption. It was revealed that there is positive and negative impacts of social media. Thus, willingness to engage citizens in the participation process is another important positive factor of the levels of social media adoption. There is no significant relationship between good prior engagements with citizens and the levels of social media adoption. It was revealed that there is no significant relationship between the knowledge to engage in the deliberative process and the levels of social media adoption while there is a significant positive relationship between the influential public/media user and the levels of social media adoption. Most of the organizations are adopting social media by the force of central policies of digital Bangladesh. Perceived usefulness and perceived ease of use play a significant in the process of adoption of social media platforms at government organizations in the country. The challenges, strategies, and outcomes of using social media in a public organization in Bangladesh. The public organization of Bangladesh is trying to apply social media platforms for the service delivery system. This is an interesting and insightful study on the topic from the context of Bangladesh. However, the current study investigates the phenomena at multiple public organizations.

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REFERENCES


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