EXPLORING FACTORS AFFECTING USE OF SOCIAL MEDIA IN E-GOVERNANCE IN PUNJAB

Sukhwinder Singh1, Dr. Anuj Kumar Gupta2, Rohan Chanan3

Abstract- As the notion of electronic service delivery has attained maturity in the Government sector, it is essential to explore new channels for an efficient and better delivery of Government services. Digital India program has provided a sound foundation to explore and adopt new and emerging channels for government service delivery. Social media is being recognized as one such important channel. The use of social media applications is emerging as a new platform with opportunities to enhance the effectiveness of performance of Government service delivery. An exponential rise in number of internet users and fast social media penetration in India offer potential for use in Government service delivery to citizens. As many state and central Government departments have already initiated the use of social media for delivering services to the citizens in some of the states under Digital India programme, it becomes important to identify and explore the factors that affect the use of social media for government service delivery. This paper is based on exploratory study to identify various factors which affect the use of social media for government service delivery mechanism in an Indian state of Punjab. The paper highlights the outcomes of an online survey of Indian e-Government experts on the factors affecting use of social media in e-Governance in the state of Punjab.

Keywords— e-Governance, Social media, factors, Government services

1. INTRODUCTION

The Government offers countless amenities to the citizens. With the aim of providing services in an efficient and effective way, the use of information and communication technology (ICT) is being continuously encouraged in governance related activities, thereby leading to the widely-known concept known as “e-Governance”. Electronic Governance or e-Governance is the application of information and communication technology (ICT) for delivering government services, exchange of information communication transactions, integration of various standalone systems and services between government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G) as well as back office processes and interactions within the entire government framework”(Saugate, 2007)[1]. The basic objective behind e-Governance is to deliver the Government services to doorstep of the citizens on an anywhere-anytime basis. In fact, many states like Andhra Pradesh in India have charted the path to move to real time governance i.e. taking predictive decision based on real time data analytics. As e-Governance initiatives have now gained acceptability all around and attaining its maturity level in India, there is a need for more advanced channels to boost up the service delivery mechanism.

In parallel, a huge rise has been observed in the usage of social media applications. Social media may be defined as a set of online tools primarily deliberated for social interactions. Examples include Facebook, Twitter, Instagram, LinkedIn, Pinterest, YouTube, Wikipedia and WhatsApp etc.

To accomplish the main theme of e-Governance, it is essential to involve the various strata prevailing in the society which is a great challenge for State and Central Government in India. So, there is a need of such a kind of platform where each & every stakeholder can participate and avail the Government services in a more convenient way. With the intention to achieve this, the usage of social media is steadily getting introduced for service delivery by Government of India. Social media applications offer a technology-oriented interface for an effective two-way communication. These applications provide a new approach to enhance transparency, accountability & service delivery mechanism in the Government sector.

In the last few years, the notion of using social media in e-Governance has found acceptance and relevance in India. The various plans by Indian Government (www.archive.india.gov.in/allimpfrms/alldocs/16485.pdf) outline that there is a need to propose strategies for using social media ensuring extensive dissemination of e-Services through multiple service access channels. Use of social media in e-Governance will result in improvement of service delivery mechanism of e-Services along with efficient citizen participation.

2. DIGITAL INDIA & DIGITAL PUNJAB

It is significant here to discuss the relevance of social media in Digital India, a holistic programme to transform India into a digitally empowered society and knowledge economy. The Digital India programme (www.digitalindia.gov.in) has been designed on nine key pillars; wherein using social media for two-way communication between Government and citizens is
one of important aspect to be dealt with. Almost all the Ministries in Indian Government are currently active on social media platform.

The term Digital Punjab has been recently introduced in the domain of e-Governance. The Digital Punjab programme aims to enhance IT infrastructure, upgrade internet connectivity, provide multi-channel service delivery, increase e-Participation etc. in urban as well as rural areas of Punjab. The state has led in various e-Governance initiatives to compete in the era of Governance reforms. According to Dataquest- IDC e-governance Satisfaction Study [39], the state of Punjab has been ranked at 16th position for customer satisfaction levels and 5th as per e-Readiness assessment by Ministry of Electronics and Information Technology. According to “Index of Internet Readiness of Indian states 2017” published by Internet & mobile association of India(IAMAI), Punjab is one of the leading states in e-Readiness, Best state in terms of e-Infrastructure, ranked first in e-District, topped in e governance initiatives in year 2015.

e-Governance has played an important role in changing and improving the life style of the citizens in urban as well as in rural areas of Punjab, but the level of harassment and corruption has not declined to such an extent as it could be(Vikram Singh &Subhash Chander, 2012)[27]. The authors have conducted a survey in Punjab and suggested to explore more channels for Government service delivery. Sushil Kumar Singla & Himanshu Aggarwal (2012)[30] have identified different factors responsible for incomplete implementation of e-Governance initiatives particularly in rural areas of Punjab. Vikram Singh, Subhash Chander and Amit Kumar (2011)[29], as a part of their research, have analyzed the responses from rural areas of Punjab and identified that there exist a direct relation between e-Governance initiatives and rural development. Jaspreet Kaur, Neeraj Sharma and Harpreet Kaur (2016)[11] have conducted a study with the objective of identifying the challenges faced by the employees in providing the e-services to the people. The study has helped to understand how much we have prospered in implementing e-governance in the state and what else we need to do to make e-governance as a successful attempt. Manjot Kaur and Amitoj Singh (2015)[18] have disclosed the key challenges for implementation of e-government services in state of Punjab.

As the initiatives at the central and state Government levels aim to motivate the use of social media in their service delivery, it is important to explore the various factors affecting the same. “Factors” here refer to the parameters having comparatively high impact on using social media in e-Governance based on the specific social, economic, cultural and political conditions in the state of Punjab.

Such kind of identification of factors can facilitate the state Government to design ideal strategies to implement the use of social media in its service delivery mechanism. This may also prove to be useful as a reference for other states with social, economic and cultural parameters similar to Punjab.

The paper has been organized as follows: next section covers the literature review on factors affecting use of social media in e-Governance initiatives globally and also specifically for India and the state of Punjab; the section on literature review is followed by a section highlighting the motivation for research; the next section presents the methodology followed by results, findings and conclusions of the study. The last section highlights the scope for future research based on this study.

3. LITERATURE REVIEW

Many researchers and experts from different parts of the world have identified various factors which affect the use of social media in e-Governance in their countries and states. Reemiah Muneer Alotaibi, Muthu Ramachandran, Ah-Lian Kor and Amin Hosseinian (2016)[2] proposed an extension to Unified Theory of Acceptance & Use of Technology (UTAUT) model by adding many parameters like performance expectancy, effort expectancy, social influence, perceived motivation (incentives, accessibility etc.), trust & cultural influence. The authors concluded that these factors had a greater impact on use of social media in Governance activities in United Kingdom.

Sohrab Khan and Dr. Nor Zairah Ab. Rahim (2016)[42] conducted a survey in Malaysia to explore the factors affecting use of social media and categorized the same in four different categories as Individual characteristics like disposition to trust, internet experience, education level; Government factors like previous experience with government, Competence, Benevolence, Integrity; Risk factors like Security risk, privacy risk, performance risk & Social media characteristics like perceived critical mask, credibility (reliability) of social media platform and access to right information. David Landsbergen (2010)[13] identified various factors affecting use of social media in e-Governance in Columbus-Ohio, USA. The author concluded that parameters like Public/private partnership, citizen participation in the policy process, cost of offering e-services etc. had a high impact on the same. Chuqing Dong[5] explored different aspects for social media based delivery of services in Minnesota and categorized the factors into five categories named Information Technology factors, Management factors, Organizational factors, Legal & regulatory factors and Contextual factors.

Gustavo Henrique Mauttasch Oliveria & Eric W. Welch (2013)[7] conducted a survey in United States as a part of their research and highlighted parameters like work characteristics, innovativeness, external stakeholder influence, technology capacity/management etc. responsible for affecting use of social media in service delivery mechanism of US Government. JooHo Lee & Soonheekim (2012)[12] experienced that strength of social networks, ease of use, social altruism, voting participation, trust in government, e-Participation, experience, age, education, income etc. have a great impact on use of social media in Government activities in OASIS.
Enrique Bonson, Lourdes Torres, Sonia Royo and Francisco Flores (2012) [4] discussed that the factors like e-Government in
by citizens, Population size etc. had a high impact on use of social media in service delivery mechanism in Europe.

Picazo S., Gutierrez I. & Luna L. F. (2012) [22] believed that factors like general context, institutional framework, inter-
organizational collaborations and networks, organizational structures and processes, information and data, technology etc.
may affect use of social media in the public sector in Mexico.

Maria-Dolores et al. [44] studied various aspects and elements influencing social media use for delivery of services to
the citizens in local governments in Italy and Spain. The author highlighted parameters like e-participation, population size,
citizens' income level and level of indebtedness etc. affecting use of social media in e-Governance.

Mamta Sareen, Devendra Kumar Punia and Lovneesh Chanana (2013) [35] explored various factors affecting use of mobile
government services in India like availability of e-Government strategy, availability of e-Government, access to users,
improve awareness and ensuring quality of mobile government services and concluded that these factors differ from the one
as identified by experts for developed regions.

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<td>2. citizen participation in the policy</td>
<td>2. Management factors</td>
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<td>3. social influence</td>
<td>experience, education level,</td>
<td>process</td>
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<td>4. perceived motivation (incentives, accessibility etc.)</td>
<td>GOVERNMENT FACTORS previous experience with government, Competence, Benevolence, Integrity &amp; Risk factors like Security risk, privacy risk, performance risk</td>
<td>3. cost of offering e-services etc.</td>
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<td>1. general context</td>
<td>1. e-Government in the city</td>
<td>1. strength of social networks</td>
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<td>2. innovativeness</td>
<td>2. institutional framework</td>
<td>2. Internet penetration</td>
<td>2. ease of use, social altruism</td>
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<td>4. technology capacity/management</td>
<td>collaborations and networks</td>
<td>4. e-Commerce use by citizens</td>
<td>4. trust in government</td>
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<td>4. Organizational structures</td>
<td>5. Central e-government</td>
<td>5. e-Participation</td>
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<td>6. Web 2.0 use by citizens</td>
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<td>5. information and data,</td>
<td>7. Population size</td>
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Table 1: Factors affecting use of social media in e-Governance globally

Table 1 depicts a consolidated picture of various factors affecting use of social media as identified by different researchers
and experts in diverse countries and states.

As per the Ministry of Electronics and Information Technology, Government of India (www.negd.gov.in/social-media) [40],
social media has potential to improve the relationship between Government and the citizens by enabling greater citizen
engagement & improving the quality of services. Social Media will help in achieving the vision of Digital India i.e. providing
“governance and services on demand”. Social media engagement would mostly utilize the pre-existing infrastructure and
would not require any additional resources.
H. Patel and D. Jacobson (2008)[21] have suggested that it is essential to redefine the service access channels to compete with the challenge of continuously increasing size of the population in India. T. Sargunam and Viji Vinod (2014)[25] have conducted a survey to examine the use of Facebook in a Government organization in an Indian state of Tamil Nadu. As citizens are supposed to be the prime customers of Government it would be beneficial if Government departments initiate the notion of using social media applications to reach the citizens. Shirish Kumar Tiwari (2013)[26] has depicted the significance of social networking sites as an efficient platform for second generation of e-governance.

4. MOTIVATION
According to United Nations e-Government survey-2016, 152 countries out of 193 are offering social networking features on their national portals. Sargunam et al. (2014)[25] in ‘Use of Social Media in Effective Implementation of e-Governance in India’ discussed that social media has the potential to change the style of governance in the present era. Banday (2013)[45] in ‘Social Media in e-Governance: A Study with Special Reference to India’ discussed various issues that hinders the successful implementation of social media in e-Governance. Researchers indicate that while use of social media is a concept in its sprouting stage and the management of using social media requires understanding a wide variety of factors affecting the same. It appears that we lack the research foundation for identification and analysis of factors affecting use of social media in e-Governance, specifically for state of Punjab.

5. METHODOLOGY
The exploratory study focuses to rely on experience of the professionals actively involved in field of e-Governance & social media in Government, Information Technology Companies, Academia, Consulting and Research Organizations etc. As the starting point, the study uses the various factors affecting use of social media in e-Governance as identified globally by researchers & experts for other countries & states. The purpose of choosing these factors is two-fold – one, to start with an initial set of factors identified globally and second, to compare the results obtained specifically for the state of Punjab vis-a-vis the results for other countries and states.

As the first step, after having a thorough survey of literature, a set of factors affecting use of social media in e-Governance identified globally by researchers and experts has been listed. The literature related to following has been reviewed:
- e-Governance
- use of social media in e-Governance

Based on the initial identified factors, the next phase of research conducted a web based survey inviting various professionals and experts for responding to questionnaire. Due to geographical dissemination of the respondents, the authors opted for web based survey. The invited experts were requested to provide their basic and demographic information along with contact details for future reference.

5.1 Sampling Technique
The exploratory research is based on stratified purposive sampling having target population as expert groups from Government officials, Academics, Research, NGOs, Consultants, IT industries, Application Developers etc. Academic databases, reputed journals, and publications were referred to explore expert groups from academics and research. The expert group from Government was drawn from the civil list, directory of officials of Ministry of Communication and Technology, Department of Governance Reforms and Department of Administrative Reforms and Public Grievances (DARPG). The reason for opting stratified purposive sampling is to have in-depth, quality responses from the invited experts. A total of 64 respondents who completed the survey included Government officials, IT and Telecom professionals, Academicians, Researchers and Consulting professionals.

5.2 The Survey Instrument
An online web based questionnaire was used as the survey instrument. Around 150 experts were requested to participate in the survey with a web link on www.surveymonkey.com. An e-mail with the web link was sent to target respondents. The survey instrument comprised of total eight questions. The first six questions for collecting demographic details like name, gender, age, sector, designation and organization. The seventh question had a list of seventeen factors to be ranked from 1 to 17. The experts had to rank the factors in order of their impact/importance for the state of Punjab. Rank 1 specified the most important factor and rank 17 for the least important factor for use of social media in e-Governance in the state of Punjab.

The eighth question was an open ended question for respondents to add any other factor that they feel is relevant and has been left out. Some of the experts used this question to provide suggestions relevant to the research.

Survey Results
The experts involved in e-Governance from different fields like Government, IT industries, Consulting companies, Academics, Research, Telecom and non-Government organizations has been targeted to collect responses.
5.3 Profile of respondents

Nearly 33% of the respondents belong to age group of 35 to 44 followed by about 31% in the age group of 45 to 54. The respondent percentage depicts that most of the respondents are senior and experienced. 23% of the respondents fall in the age group of 25 to 34 while 13% respondents belong to age group of 55 to 64. In terms of gender, 92% of the respondents are male while 8% are female. Moreover, all the respondents belong to India only.

![Fig.2: Age profile of respondents](image)

![Fig.3: Gender profile of respondents](image)

Figure 4 depicts the sector-wise distribution of the respondents. Majority of the respondents i.e. 42% belong to Government sector, while 25% respondents are from IT industry followed by 10% from Consultancies/Advisory. The respondents from Academia constitute 11%, Research 7%, Telecom 3% and other sectors 2%. Generally, it clearly depicts a healthy mixture of almost all the sectors expected to be involved in e-Governance.

![Fig.4: Sector-wise distribution of experts](image)

5.4 Experts’ Ranking of identified factors

As discussed above, the experts were presented with a set of 17 factors identified by researchers and scholars globally and requested to rank them in the order of their priority of impact as per social, economic and cultural conditions of the state of Punjab. The rank one specifies the most important factor having highest impact on use of social media in e-Governance while the rank seventeen for the least important factor having very less impact on the same. The experts’ responses were analyzed and average rank was calculated for each factor (Table 2).

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<th>S.no</th>
<th>Factors</th>
<th>Average Rank</th>
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<tr>
<td>1</td>
<td>IT literacy of stakeholders</td>
<td>5.40</td>
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<td>2</td>
<td>Awareness &amp; Motivation of user (About the availability &amp; incentives of using social media based G2C services, Strength of social media like Information sharing at an exponential rate &amp; nearly Real Time two way communication)</td>
<td>6.17</td>
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<tr>
<td>3</td>
<td>Acceptance by users (Reliability on social media based G2C services, using native language etc.)</td>
<td>6.37</td>
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<td>6</td>
<td>e-Government in the City or state(Availability of e-Government services as a prerequisite for social media based services)</td>
<td>7.03</td>
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5.5 Analysis of Results

As per the average ranks of the experts’ responses, the top five factors having comparatively higher impact on use of social media in Government service delivery in the state of Punjab are:

1. IT literacy of Stakeholders.
2. Awareness & Motivation of users.
3. Acceptance by users.
5. e-Participation.

Moreover, other equally important factors in order of their priority are “e-Government in the city/state” and “IT infrastructure”.

6. CONCLUSION

This paper has revealed the outcomes of an online web based survey of the experts regarding factors affecting use of social media in e-Governance in the state of Punjab. The survey results indicate the following findings:

- There is a need to focus on IT literacy of stakeholders, increasing awareness and motivation of users, acceptance by users, designing ideal Government frameworks & strategies and enhancing e-Participation of the citizens of Punjab.
- Factors affecting use of social media in e-Governance in Punjab are different from the one identified by the researchers and experts globally for the developed regions.

7. FUTURE WORK

The findings of this exploratory research can be used to explore sub-factors under each of the identified factors. The results can also be taken for further research in other states of India. Moreover, the relation between these factors and the quality of Government to Citizen Services can be another area of research.

8. ACKNOWLEDGEMENT

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9. REFERENCES


