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# Exploring Social Media Adoption in Australian Local Government Organizations

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## ***Abstract***

Local government organizations have recently been attracted to social media applications to improve services to their communities. Yet, limited scholarly attention has been devoted to understanding social media adoption across local government. This study addresses this shortcoming by exploring the factors that drive the adoption of social media within Australian local government. The findings draw on qualitative evidence from interviews conducted with twenty-one local government organizations. The role of technological, organizational and environmental factors in social media adoption is investigated. This includes factors such as relative advantage, perceived security, management drive, social media policies, community demand and bandwagon effects. The findings can have important managerial implications in helping local government to better understand social media adoption in their organizations.

## ***Keywords***

Social media, local government, technology adoption, Australia

## **1. Introduction**

The rapid diffusion of social media has attracted many government organizations around the globe including local government (Anttiroiko, 2010). Social media can help local government to become more responsive to citizens, engage with the community and promote both accountability and transparency (Accenture, 2009; Australian Government, 2009; Eggers, 2007). Additionally, social media can offer cost savings and flexibility (Lim & Palacios-Marques, 2011) whilst providing opportunities for improving service delivery and obtaining effective and efficient feedback from the community (Chang & Kannan, 2008; Markova, 2009; Osimo, 2008). Evidence is emerging focused on how local government in the United Kingdom, United States, Australia, Germany and New Zealand are trialing social media for improving their services to the public (Anttiroiko, 2010; Purser, 2012; State Services Commission, 2008; Towns, 2010).

Social media can be defined as a collection of interactive web-based applications based on Web 2.0 technology that enable active interactions between web users to create and share information on the web (Boyd & Ellison, 2007; O'Reilly, 2007). Although social media and Web 2.0 are distinct concepts they have been used interchangeably in the literature. Web 2.0 represents a newer platform foundation of the web which consists of a set of technologies (e.g. Adobe Flash, Really Simple Syndication or RSS) to enable richer content to be published on the web (O'Reilly, 2007). By contrast, the foundation of social media is based on user generated content (UGC), that is, various forms of media content created by internet users and available on the web based on Web 2.0 technology (Kaplan & Haenlein, 2010). Social media applications include blogs and micro blogs (e.g. blogger & twitter), wikis (e.g. Wikipedia), social networking (e.g. Facebook, LinkedIn), multimedia sharing services (e.g. YouTube), content syndication (e.g. RSS feeds), podcasting and content tagging services (Anderson, 2007; Hansen, Shneiderman, & Smith, 2010).

Given the unique nature of social media (O'Reilly, 2007), its differences to ICTs and web technologies generally (Cormode & Krishnamurthy, 2008), and the differences between public sector organizations, particularly local government with private sector firms, extant technology adoption research may not be readily useable for explaining the social media adoption in local government organizations. Consequently, further research is required to enhance understanding of social media adoption in local government organizations. To address this shortcoming, this study aims to answer the following research question: what factors determine the adoption of social media across local government organizations? The research is focused on local government in Australia because of the rapidly emerging trend of social media adoption in this setting and the growing attention and interest that social media research is attracting, particularly after its effective use during natural disasters (Alam & Walker, 2011).

The remainder of this paper first reviews extant literature and discusses the theoretical framework, before explaining the data collection and analysis considerations. The findings are subsequently presented before the paper is concluded.

## **2. Literature Review**

The use of social media by Australians is growing rapidly. Sixty-two percent of internet users in Australia have a social media presence, 97 percent of whom use social network applications, with Facebook being the most popular (Sensis, 2012). The growth of social media use in Australia is changing the way people communicate and interact with each other and with private and public sector organizations including local government (Howard, 2012; Purser, 2012). Consequently, an increasing number of Australian local government organizations, ranging from metropolitan, rural and remote, have recognized the growing trend of social media use and the advantages it can offer and are beginning to engage with the public by using social media in different ways. This includes promoting events and activities, providing clarification on issues, issuing alerts, gaining community input and engaging with youth (ACELG, 2011; Howard, 2012; Purser, 2012). Social media applications such as Twitter and Facebook were also used by local government to inform and update residents during natural disasters in 2011; the Queensland floods and cyclone Yassi (ACELG, 2011).

Despite the growing number of local government organizations taking part in implementing social media applications and federal government investment in terms of financial and organizational resources to fund social media initiatives (Steward, 2012), the uptake by government organizations in Australia has been sluggish and not as good as the development in the corporate world (Samuel, 2009). In a recent survey of 235 local government organizations across Australia only 25 percent used social media and only 6 percent of local government organizations were identified as using social media extensively (Purser, 2012). Another recent review of 560 local government organizations' websites found that many are still based on one-way interaction and only 82 promoted social media applications (Howard, 2012).

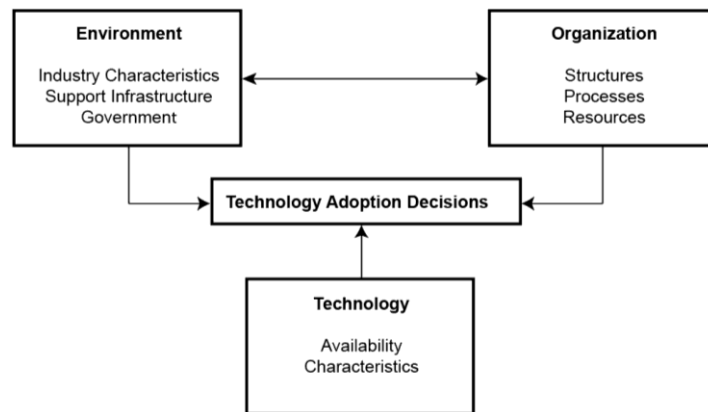
As with any developments of ICT projects, investment in social media requires organizational change to culture, people, structure and processes if effective results are to be obtained (Dadashzadeh, 2010; de Kool & van Wamelen, 2008). According to Osimo (2008) government organizations need to have a clear social media strategy to ensure the success of social media initiatives. Thus, in order to utilize the full potential of social media, a systematic approach is needed to identify the key determinants that influence successful adoption. Although various studies (Chang & Kannan, 2008; Meijer & Thaens, 2010; Wigand, 2010) and reports (Howard, 2012; Osimo, 2008; Purser, 2012) have been presented by both scholars and practitioners on the use of social media to enhance service delivery and its many benefits, there is agreement amongst scholars that their adoption across local government remains under-researched (Millard, 2010; Nam, 2011; Wigand, 2010). Limited academic studies have been found that can improve the understanding of the factors that drive social media adoption both locally and internationally. Notably, James and Clarke (2010) explored the factors for designing social media applications for Australian local government organizations whilst Purser (2012) focused on exploring the benefits, risks and barriers of using social media in Australian local government organizations in addition to identifying areas where social media could be used effectively. Samuel (2009) outlined a number of deterrents which may make government organizations in Australia unwilling to embrace social media while Alam and Walker (2011) investigated visible government and audience online participation on six Australian Government organization Facebook pages.

Saldanha and Krishnan (2012) claim that their study was the first to investigate the adoption of social media in private firms by using the TOE framework. They found that perceived benefits, organization size and environment characteristics have a positive relationship with social media adoption. However, the findings of this study may not necessarily be readily transferable for explaining social media adoption in public sector organizations including local governments. There are a number of reasons for this. Public and private sector organizations have different strategic and operational goals. The primary goal of private sector firms is profit maximization while public sector organizations generally have multiple goals including providing better public services such as education, healthcare, transport and urban planning (Boyne, 2002). Public sector organizations also operate in an environment with little or no competitive pressure relative to their private sector counterparts. Consequently, the former may face less pressure to be efficient than the latter. Managers in the private sector may be motivated by direct monetary incentives (e.g. performance-based end of financial year bonuses) which may not necessarily be provided to managers in public sector organizations (Boyne, 2002). Finally, Rocheleau and Wu (2002)

confirmed that private sector organizations invest more resources in ICTs compared to the public sector. This is because the private sector views ICT as an important enabler for enhancing their competitive advantage which may not be as critical for public sector organizations given they operate like a monopoly for most public services.

### 3. Theoretical Framework

The literature on technology adoption suggests that various theories have been used for explaining adoption. These models can be divided into two broad categories which attempt to explain technology adoption by individuals and organizations. Technology Acceptance Model (TAM) by (Davis, 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by (Venkatesh, Morris, Davis, & Davis, 2003) have been used predominantly for explaining individual adoption for various kind of technologies (Saldanha & Krishnan, 2012). In organizational contexts, an examination of the literature of organizational technology adoption suggests that most research is based on theories such as Diffusion of Innovation Theory (Rogers, 1995), Institutional Theory (Scott, 1987), Resource-based Theory (Wernerfelt, 1984) and the technology-organization-environment (TOE) framework (DePietro, Wiarda, & Fleischer, 1990). This study uses TOE, a prominent approach used by scholars to explain, analyze and distinguish the drivers that influence technology adoption in organizations (DePietro et al., 1990). This framework is often used to describe the context in which adoption take places. The TOE framework (Figure 1) incorporates factors that can influence adoption by organizations based on the technological, organizational and environmental contexts (DePietro et al., 1990; Fichman, 2000; Jeyaraj, Rottman, & Lacity, 2006).



**Figure 1:** Technological innovation adoption contexts based on (Depietro et al., 1990)

The technological context concerns the inherent characteristics of a technology that can influence its adoption within organizations (DePietro et al., 1990). For example, potential adopters assess the characteristics of the technology by evaluating its advantages over adoption costs (Premkumar, Ramamurthy, & Nilakanta, 1994).

The organizational context includes factors that characterize organizations such as size, structure, resources availability, readiness and infrastructure (DePietro et al., 1990). A positive

organizational atmosphere which includes having good management support and conducive policies can help organizations in their decisions to adopt new technologies (Premkumar et al., 1994; Saldanha & Krishnan, 2012).

The environmental context consists of the characteristics of the arena where organizations operate that can have an impact on them. This includes interactions with government (e.g. by way of regulation) and competitors (DePietro et al., 1990). Environmental factors such as success stories can encourage potential adopters to adopt technologies by raising awareness and creating bandwagon pressures (Troshani, Jerram, & Rao Hill, 2011).

The TOE framework has been consistently used by researchers to investigate technology adoption in various organizational contexts such as Web 2.0 (Saldanha & Krishnan, 2012), social media in business organizations (Parveen, 2012), cloud computing (Low, Chen, & Wu, 2011), e-business (Zhu, Kraemer, & Xu, 2003; Zhu & Kraemer, 2005), e-government (Pudjianto, Zo, Ciganek, & Rho, 2011) and EDI (Chwelos, Benbasat, & Dexter, 2001). Extant research has identified factors within the three contexts that operate in various domains and national contexts (Baker, 2012). Nevertheless, there are consistent and growing calls to extend the TOE framework to additional domains (Low et al., 2011) due to the complex and context-sensitive nature of technology adoption (Wolfe, 1994). In this study, we adopt the TOE framework for two reasons. First, the nature of this study is exploratory and the broadness and integrative nature of TOE can create opportunities for new relevant constructs to be identified (Li, Lai, & Wang, 2010; Parveen, 2012) whilst also minimizing bias in construct selection. Second, although specific factors may vary across specific contexts, the TOE framework has a solid and consistent theoretical basis, consistent empirical support and the potential to be applied to other IS innovation domains (Kuan & Chau, 2001; Oliveira & Martins, 2010; Xu, Zhu, & Gibbs, 2004). Thus, because this study is attempting to explore the factors behind the social media adoption in local government, using the TOE framework as a guide is not unreasonable.

#### **4. Data Collection and Analysis**

This study is exploratory in nature. It uses qualitative data as the main evidence. Data was collected using semi-structured face-to-face and phone interviews. Interviewing can be a powerful data collection technique because of its flexibility and ability to help source in-depth information for exploring and understanding respondents' viewpoints on research issues (Huberman & Miles, 1994). In this study respondents from twenty-one local government organizations across Australia that have adopted or were in the process of adopting social media applications were interviewed. The interviews were conducted in early 2012. Judgment sampling was used to select local government organizations in order to obtain a good representation and productive participation from across Australia including metropolitan and rural locations (Marshall, 1996). Innovative local government organizations that are using social media were identified by consultation with the Australian Centre of Local Government Excellence (ACELG) and by analyzing relevant web sites. Selection of interviewees was based on their involvement with social media applications within their organization. Typically interviewees were knowledgeable about the adoption decision and were willing to participate in the study (Kumar, Stern, & Anderson, 1993). They were either the public relations or social media officers and were highly involved in introducing and implementing social media applications for their

organization. Snowballing was also used to identify interviewees by asking for referrals from participants (Sekaran, 2003). Interviewees were asked to suggest other local government organizations that were known to have used social media effectively. Table 1 below shows the location and identifier of the organizations involved in the interviews.

<b>Australian State</b>	<b>Identifier</b>
South Australia	SA 1-6
Victoria	VIC 7-12
Western Australia	WA 13-14
Queensland	QLD 15-18
New South Wales	NSW 19-20
Tasmania	TAS 21

**Table 1:** Local government organization participants

The interview questions focused on topics such as current use of social media, objectives for adopting social media, benefits of using social media, characteristics of social media applications used, organizational support, resources provided, community expectations and influence from other parties. During the interviews additional questions were raised to gather more in-depth information. The TOE framework was used as a guide to analyze the interview transcripts.

Construct validity has been adequately addressed by using multiple sources of information (Yin, 2009). Primary data were collected from interviews and secondary data from local government organization websites and relevant white papers. Interviews were with employees that carry out different roles within the organizations thus giving a different perspective and providing further triangulation of qualitative information (Huberman & Miles, 1994). Whilst one of the investigators carried out the interviews, all three participated in data analysis, thereby reducing the potential bias that is commonly cited as a limitation of qualitative information sources, thereby strengthening triangulation even further (Yin, 2009). A chain of evidence was also maintained which traces the collected data to the interview summaries and conclusions. Validity was further addressed by carrying out follow up interviews to clarify unclear issues and gain a more in-depth understanding to make the findings more rigorous. These measures have enhanced the reliability of this research, thereby improving its overall quality.

## **5. Findings**

The factors that influence social media adoption in Australian local government organizations are discussed in this section.

### **5.1 Technological Context**

#### *5.1.1 Relative advantage*

Relative advantage of social media was consistently identified as one of the most important factors influencing social media adoption. The advantages that were discussed in relation to this factor include ease of access, instant communication, low maintenance and operational costs and the ability to create two-way communication with the community. Ease of access and instant communication with the local community was perceived as being useful. Interactions with the

community included promoting local activities, disseminating information for weather warnings and other emergency issues, correcting misinformation and engaging with the community on a range of issues which could be done ubiquitously, independent of time and place. These benefits were expected to help build better communication with the community including a wider reach, particularly with youth groups that are highly engaged with social media. For example:

*Well basically it's an approach for the council to engage with as many communities as possible, to feed them with information that they seek and get feedback from them, so I think social media has the capabilities to deliver our messages quickly and it is also another means for us to get instant feedback. (QLD 15)*

While there was a general agreement that social media was important in engaging with the community, there are also concerns that its potential benefits will be outweighed by the effort of monitoring social media applications.

*Every question has to be responded to in a very timely manner. You have to do it quickly because it is a real time world. It is very labor intensive. This means that we must always have somebody to monitor all the conversations and information exchange happening in the site. (SA 1)*

### 5.1.2 Perceived security

Fear that negative comments will be aired publicly by unauthorized parties was perceived as a risk by the interviewees. They were concerned that someone would be able to post negative remarks, such as racist comments or council bashing, which may harm the council's reputation.

*... there is a lot of potential problems that we could see emerging, such as people misusing it. So, we don't know what's going to happen. (NSW 20).*

Fear of illegal breaches into the organization's network from spyware as well as fear of viruses and malicious software was also perceived as a potential security risk. The breach could also be caused by irresponsible use of social media by employees (e.g. malicious code through Facebook apps).

## 5.2 Organizational Context

### 5.2.1 Management drive

Management drive was considered as one of the key factors in driving adoption. There was agreement by the respondents that management actively encouraged staff to explore and use social media as well as provide appropriate resources. This was critical for ensuring effective social media adoption:

*Our CEO also is very passionate in communicating online. When we get that support from the top and an expectation from the top that we keep up to speed with everybody, then that was the directive that we need to follow. (VIC 10).*



### 5.2.2 Social media policies

Social media policies were stressed by many as a consideration affecting the adoption decisions. Social media policies concerning the handling of legal issues, guidelines of use for both staff and local residents can drive social media adoption by providing confidence before deciding to adopt and use social media. Some respondents indicated that without adequate policies, they would be unable to fully take advantage of social media benefits:

*... the biggest challenge was the policies and guidelines in the organization and deciding how social media should be adopted and who should be able to use it; how strict we should be with it. (QLD 18).*

## 5.3 Environmental Context

### 5.3.1 Community demand

The influence of community demand was perceived to be a major driver on social media adoption. There was general agreement that the increasing use of social media by the community raises the need for councils to be able to communicate and respond also by using social media. This requirement to respond to community demand to use social media as one of its communication channels was raised by many interviewees:

*The main thing from the council's perspective is to be responsive to the needs of the community. The community these days expects to be able to communicate in a whole lot of different ways. (VIC 11)*

### 5.3.2 Bandwagon effect

Bandwagon effect refers to the impact of success stories from local government organizations that had adopted social media on those that were contemplating to adopt these technologies. Those that had been successful in implementing social media and allowing their benefits to be observed can create a bandwagon effect that can influence adoption decisions by others:

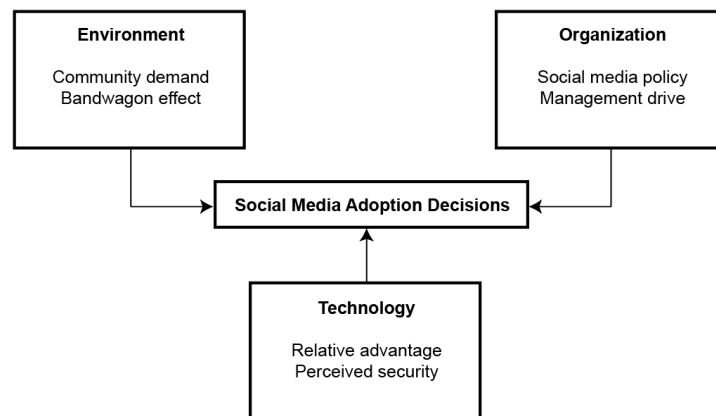
*We do see other councils and how they are using it to reap benefits, so that impacted on why we should take it up. We also learn from other councils to not only use it for disasters but how to utilize it in day to day operations. (QLD 16).*

## 6. Discussion

The diagram shown in Figure 2 below summarizes the factors that can impact on the adoption of social media in local government organizations in Australia.

Our analysis provides insights on the factors that influence social media adoption in Australian local government organizations. These include relative advantage, perceived security, social media policies, management drive, community demand and bandwagon effects. Technological factors featured prominently in explaining social media adoption. Relative advantage was the major driver of social media adoption in local government. Our findings indicate that active social media adopters are those who are aware of social media benefits. Many interviewees reported that as they become aware of social media benefits and understand how it can be used effectively, the adoption process become easier. This suggests a need for greater awareness campaigns on social

media benefits by adoption champions is required in order to influence decision makers. While there was a general agreement that social media can promote better engagement with the community, there were also concerns regarding its potential lack of security. A major concern is negative comments that may damage the organizations' reputation. This is caused by lack of understanding on how to use social media. In reality, negative statements about local government organizations will be there regardless of whether or not social media is used. By using social media effectively, organizations can turn the fear and negative remarks to their advantage. By interacting with the community through social media, they can correct misinformation that is spread in the community and can have better control over messages rather than having statements misused by inappropriate parties. Perceived lack of security can reduce the willingness of local government organizations to trial social media applications. However this can be overcome if organizations have the correct information and a good understanding of how social media can be used as an effective channel of communication.



**Figure 2:** Factors affecting social media adoption in local government organizations

Organizational factors that drive social media adoption include management drive and social media policies. Not surprisingly, management drive played an important role in driving the adoption. The reason is that as the adoption progresses, the role of management is critical for providing adequate human, financial and infrastructure resources. Management drive also ensured adoption by constantly monitoring adoption initiatives. Interviews with successful adopters of social media reveal how important it is for management to become involved in the initiation of social media. When management support and drive social media adoption it positively influences that adoption.

The need for organizations to develop a policy before implementing social media emerges as another important theme in the interviews. Social media policy outlines procedures and guidelines in relation to the use of social media. Our interviewees suggest that with no or incomplete policies the organization faced uncertainties in dealing with negative or offensive contributions or remarks, legal issues, security problems and even inappropriate use of social media by staff. Thus, in the early adoption stages, efforts should concentrate on developing a complete social media policy prior to embarking on adoption initiatives as a way of creating a suitable policy backing for handling issues as they emerge.

The influence of bandwagon pressure was also an important determinant of social media adoption. Sharing success stories from local government organizations that have implemented social media applications creates bandwagon pressures by inspiring many organizations to follow in others' successful footsteps. Social media adoption also relies on community demand for daily interactions. Therefore, local government organizations need to go further than providing one-way information and become more participatory in the discussions on social media applications to engage with the community.

## **7. Conclusion**

This study improves the current understanding of social media adoption in Australian local government organizations which is an under-researched area. Qualitative evidence collected from interviews has helped isolate factors that can impact on the adoption of social media. Consistent with technology adoption research in organizations these factors can be categorized in accordance to the TOE framework. This includes technology factors (relative advantage and perceived security), organizational factors (social media policies and management drive), and environmental factors (community demand and bandwagon effects). This study has, thus, extended and validated the TOE model further by explaining social media adoption in local government organizations. The study confirms the applicability and the usefulness of the TOE framework for exploring the adoption of social media in Australian local government organizations.

While this study uses the experiences from various local government organizations across Australia, the fact that the qualitative evidence was only drawn from twenty-one local government organizations suggests that the insights from this study may not be generalizable. Furthermore, the respondents for this study are only local government organizations that are currently adopting social media. Therefore, further qualitative and quantitative evidence is needed to address this limitation. The next stage of this research is to survey all 560 local government organizations in Australia. The model of social media adoption developed in this study could also be tested in other settings, in other countries for example, to further investigate and explore social media adoption and implications. This study can also be used as a basis for exploring later adoption stages including social media assimilation in local government.

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