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The perceived public value of social media in Queensland local Councils

(RESEARCH IN PROGRESS)

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Abstract

The use of social media technology (SMT) has become a mainstream activity in private and business sectors. SMT is believed to be an important component of information technology in the public sector. Measuring the ability of SMT as a means for interacting with citizens to create public value is one of the key issues facing local government in their adoption of SMT. Merely having a social media (SM) icon on a webpage does not demonstrate usage of SMT, neither does it necessarily create value nor does it improve interaction with citizens. This study aims to research the public value of SMT, and specifically, how citizens perceive social media value in Queensland local councils. Survey participants were drawn from 20 urban and rural local councils that have the most experience in SMT for interaction with citizens and those that also have a large number of social media users. This study aims to evaluate citizen perspectives on the public value creation of using SMT with local councils.

Keywords Social media technology, Public value, local councils.
1 Introduction

1.1 Background of Study

A new generation of technologies facilitates social networking, information sharing and collaborative work, and cooperation with citizens and social organisations (Osimi et al. 2009). Social media technology (SMT) refers to web-based and mobile applications that allow individuals and organizations to create, engage, and share new user-generated or existing content, in digital environments through multi-way communication (Kietzmann et al. 2012). Governments and public sector organisations are focusing on investments in these technologies as part of their Information Technology (IT) strategy (Dadashzadeh 2010).

The majority (68%) of Internet users in Australia have a social media (SM) profile and nearly all (93%) SM users are on Facebook, spending an average of 8.5 hours per week on the site (Sensis 2015). The majority (70%) of SM users also use a smart phone to access the platforms (Sensis 2015). The majority (95%) of Australian SM users access social networking sites to catch up with family and friends. Nearly half (47%) use social media to access news and current affairs (Sensis 2015). The use of social media by Australians is growing rapidly.

There are over 2.8 million Queenslanders registered on Facebook and approximately 2.5 million Australians using Twitter (QGCIO 2015). Not only is usage increasing, but public demand is also growing around the use of social media as a convenient communications platform, along with the expectation from residents for participation from the government (QGCIO 2015). There is a lack of published statistics on actual use of these initiatives, and on the actual percentage of use of these initiatives in Queensland local councils. Analysis of websites of 78 councils in Queensland by the researcher (March - May 2016) found that Facebook is the most widely adopted SMT by councils (65 out of 78 councils). In Queensland, 25 councils use Twitter, while 20 have a presence on YouTube, nine use Instagram, seven use LinkedIn, and six councils use RSS. Only 13 councils did not have a social media presence.

Local government is an important subject for the study of social media and interactivity because of its traditions of citizen participation at the local level (Mossberger et al. 2013). The key reason for public sector organisations to embrace digital communication is to reach and engage their citizens including traditionally hard-to-reach audiences such as the younger generation and people in remote locations (Tsu et al. 2010). The use of ICT to improve government connectivity and interactivity is a potential means to improve the public value for citizens (Castelnuovo & Simonetta 2008). Public value is the value created by government services, laws regulation and other actions (Kelly et al. 2002).

The paper is organised as follows. After introducing the issues, motivations, and problems associated with evaluating the perceived public value of social media, the study objectives and contribution are provided. Next, prior work on the concept of social media and public value is reviewed to highlight the gap in the literature. The conceptual framework to evaluate the public value of social media is presented. Following this, the proposed methodology for this research is described. Finally, the conclusion provides a summary and limitations of the study.

1.2 Motivation for the Study

Social media sites are used in in government today but they are often one-way communication tools and may not have the capacity to increase citizen engagement with local councils. Most local governments use social media passively to communicate information to citizens (Mergel 2013). While there are large audiences of the official social media pages of local councils, a high number of followers does not automatically mean an engaged audience. Citizen engagement in local council social media, in general, is still low (Bonsón et al. 2016).

The majority of local councils do not have a clear vision for the use of social media technology (SMT) to interact with citizens (Omar et al. 2014). Merely “having a social media icon on a webpage does not demonstrate usage” (Oliveira & Welch 2013). Social media has not yet moved society very far in the direction that optimistic theorists had predicted in terms of allowing citizen participation (Katz & Halpern 2013).

Although a number of frameworks and methodologies have been developed to evaluate the public value of e-government (e.g. AGIMO 2004; Karunasena & Deng 2010; Omar et al. 2014), there is a lack of research on evaluating the public value where social media tools are employed in government service delivery and interactions with citizens. To the authors’ knowledge, no frameworks have yet been developed to evaluate the public value of social media tools that are implemented and used by government to interact and serve their constituents.
There is some concern about the extent to which citizens in rural, remote and isolated communities and people in positions of socio-economic disadvantage have been able to fully incorporate the digital environment, to access web-enabled services in their lives, and particularly the public value of social media (Howard 2012). The key research questions are:

- What are the factors perceived to affect the public value of social media in local councils in Queensland Australia?
- What is the public value that citizens believe they derive from using social media technology in local councils in Queensland Australia?

1.3 Study Contribution and Objectives

The study aims to capture the way citizens perceive the value from their interactions with their local government on SM platforms, and to provide local government with a clearer picture of what their citizens think about many aspects involved in the interactions on these platforms. Understanding how citizens think and behave may help governments steer interactions more effectively to create public value among citizens. The research results could be helpful for Queensland local governments to justify investments in SM, and may help Queensland local governments to attract more support for the implementation of future SM initiatives. Specifically, the objectives of this study are:

- To investigate the factors affecting the public value of social media in local councils in Queensland Australia.
- To measure the perceived public value of social media from the perspective of citizens in local councils in Queensland Australia.

2 Literature Review

2.1 Social Media Technology

The term social media technology (SMT) refers to a set of online tools that are designed for and centred on social interaction (Bertot et al. 2012). The two-way flow of information that is facilitated through social media use can foster democracy by allowing for greater citizen participation, knowledge of government actions, and more opportunities for engagement (Macnamara et al. 2012). Social media emphasizes “interactivity, co-creation of content, subscription-based information services, and third-party application development” (Kingsley et al. 2010). The open, dialogic nature of social media eliminates many of the barriers to citizen communication that governments have historically experienced (Bertot et al. 2010). Social networks, especially Facebook, were considered the most important social media in public relations and strategic communication efforts (Wright & Hinson 2013). Social media has grown beyond the purely ‘social’ realm and is now increasingly used to cause real impact, in terms of community activism, civic engagement, cultural citizenship and user-led innovation (Foth 2011).

Through the use of social media sites, local government can better manage resources and local knowledge, monitor and resolve issues in communities and engage with constituents in their own environment (Danis et al. 2009). The rapid adoption of these technologies by citizens has meant that governments have gradually started to use sites to reach these Internet audiences, but there still appears to be little consistent organised effort (Kuzma 2010). Although social media has experienced rapid growth and provides advantages, there are still a number of challenges facing social media stakeholders such as “damaging behaviour by citizens, uncertainty, fear of risk, lack of knowledge, and lack of trust” (Omar et al. 2014), the digital divide and inadequate technological infrastructure and skills to take on new technologies in local government (Picazo-Vela et al. 2012). Wigand (2010, p. 13) called for further research to identify the “metrics [that] can be used to assess the effectiveness of social media”. These technologies open up a new set of benefits, and social values in the context of the use of social media in local government to enhance their work. In order understand these technologies for government organisations, it is necessary to evaluate those tools from a citizen’s perspective.

2.2 Public Value

The concept of public value is a normative theory for measuring the performance of public services (Moore 1995). Public value can be understood as the value or importance citizens attach to the outcome of government policies and their experience of public services (Moore 1995). The underlying principle of the public value concept is that the value to citizens should guide the operations of public
organisations on the delivery of public services (Moore 1995). This is because the ultimate goal of public programs including e-government initiatives is to create value for citizens (Meynhardt 2009; Moore 1995).

The term public value has widely been used to examine the performance of public services, owing to its inherent capacity to evaluate the performance of public services from the perspective of citizens (Benington 2009; Kelly et al. 2002). Public value is used to measure the total impact of government activities on citizens in terms of the value it creates (Benington 2009; Kelly et al. 2002).

Governments worldwide are striving to deliver more efficient and effective public services in order to meet the increasing demands and expectations of citizens whilst overcoming the major hurdle of reduced public budgets (Ferro et al. 2013). ICT in this context is considered to be instrumental in the improvement and innovation of public services (Zissis & Lekkas 2011). In this context, UN (2003) has mentioned “People express preferences, the government uses ICT to enhance its own capacity to deliver what people want, and eventually public value is created” (United Nations 2003). E-government is often seen as a process of creating public value with the use of modern ICT (United Nations 2003). In light of this discussion, creating public value is becoming the primary goal of e-government using Web2 and social media technologies (United Nations 2014). The empirical research on local government indicates that public value creation is still immature (Meynhardt & Bartholomes 2011).

An extensive review of the literature indicates a lack of empirical studies that specifically examine the public value of social media from the citizen’s perspective within the context of local councils.

3 The Gap in the Literature

Previous research indicates a lack of studies that examine the role of SMT within local councils, especially in remote communities (Campbell et al. 2014). In an era where the scope and role of local government are constantly being scrutinized and where levels of citizen engagement are low, municipalities need to actively use SM to involve citizens properly in all aspects of local governance (Ellison & Hardey 2014; Lee & Kwak 2012).

Public sector social media adoption remains an under-researched phenomenon in e-government (Sharif et al. 2015). There is very limited empirical research examining the impact of content types on stakeholders’ engagement on social media platforms (Bonsón et al. 2015). Despite the growing number of local government organizations participating in social media implementations and federal government investment in terms of financial and organizational resources to improve social media initiatives (Steward 2012), the uptake by Australian government organizations, including local government, has not been commensurate with private sector developments (Samuel 2009). Social media technology use and its impact at local government level is still tentative and remains a developing area (Sivarajah et al. 2015).

A theoretically motivated investigation of SMT in the work place is now an imperative for the fields of communication, management, and information systems (Leonardi et al. 2013). Further research is required for the development of methods and practices of effective SM utilization in government, and the investigation of their impact and value, and also the challenges (Criado et al. 2013). The research on public value on local government is flourishing, but empirical studies of public value creation are still immature (Meynhardt & Bartholomes 2011).

Public Value is a useful concept for evaluation of government activity (Bryson et al. 2014). This research focuses on the value perceived by citizens of SM and adopts factors that affect the public value of SM. The study will draw upon the Technology Acceptance Model (Davis 1989), Technology Acceptance Model (TAM2) (Venkatesh & Davis 2000) Public Value theory (Moore 1995), and Public Value Net Benefits model (Scott et al. 2016). A model is proposed that defines factors in five categories: demographic factors, perceived usefulness, and perceived ease of use, intention to use, usage behaviour, and types of users that affect the public value of SM. The conceptual model defines three public value clusters: efficiency, effectiveness, and social value. As shown in Figure 1 and Table 1, the conceptual model consists of eight hypotheses linking seven constructs.

| H1 | Differences in demographics factors such as age, gender, education, and rural/urban location have a direct influence on the perceived public value of SMT use. |
| H5 | Type of user is expected to moderate the effect of demographic factors on the perceived public value of use of SM. |
The perceived public value of social media

**Table 1. List of hypotheses tested in study.**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Demographics</td>
</tr>
<tr>
<td>H2</td>
<td>Perceived usefulness of SMT influences intention to use.</td>
</tr>
<tr>
<td>H3</td>
<td>Perceived ease of use of SMT influences intention to use SMT.</td>
</tr>
<tr>
<td>H4</td>
<td>Perceived ease of use of SMT influences perceived usefulness.</td>
</tr>
<tr>
<td>H5</td>
<td>Type of user</td>
</tr>
<tr>
<td>H6</td>
<td>Type of user is expected to moderate the effect of usage behaviour on the perceived public value of use of SM.</td>
</tr>
<tr>
<td>H7</td>
<td>Intention to use SM directly affects usage behaviour.</td>
</tr>
<tr>
<td>H8</td>
<td>Usage behaviour of SM directly affects perceived public value of SM.</td>
</tr>
</tbody>
</table>

**Figure 1: A Conceptual framework to evaluate citizen perspectives on the public value of SM (based on Davis 1989; Moore 1995; Scott et al. 2016; Venkatesh & Davis 2000).**

### 4 Research Methodology

#### 4.1 Research Method

Using a theoretical framework that drives the research is a prevalent feature of a confirmatory research (Christ 2009). Adopting a quantitative approach is necessary in this research to fulfil the confirmatory objectives developed in the research. Quantitative research is a means for testing objective theories by examining the relationship among variables (Creswell 2013).

#### 4.2 Research Scope and Sampling

The state of Queensland is divided into metropolitan and rural regions with a total population of 4,778,854 million (QG 2015). There are 78 local council areas with 43 of these areas making up the urban region, and the rural region comprises 35 local council areas (QG 2014). Preliminary research has been conducted involving website analysis of the availability of SM tools. Evaluations were performed from March 2016 to May 2016 on all Queensland council websites.

The preliminary research helped the researcher to select local council areas that have applied SM initiatives. After this analysis, the researcher selected 20 city, urban and rural local councils that have the most experience in SM for interaction with citizens and which also have a large number of SM users for inclusion in this study (as listed in Table 2).

A stratified random sampling technique was selected as it allows the researcher to divide the population into subpopulations and to take a sample of each subpopulation such as cities, urban, and rural populations (Zikmund 2013). The sample targeted to evaluate citizen’s perspectives of the public value
of SMT is Queensland citizens who may use the SMT provided by local councils. Twenty Queensland councils were identified from three strata: five councils located in city areas, eight councils in urban areas, and seven rural councils. The residents will be selected randomly from each council area. Due to temporal and financial constraints, it is difficult to collect data from the entire population, because the councils are widely spread across the state of Queensland. To avoid bias and ensure a representative sample, 0.1% of SM users from each council are selected to provide a minimum sample size of 310 SM users, as listed in Table 2.

<table>
<thead>
<tr>
<th>Council Type</th>
<th>Council Name</th>
<th>Number of SM users</th>
<th>Target number of responses</th>
<th>Year SM adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Brisbane City Council</td>
<td>75,402</td>
<td>75</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>Gold Coast City Council</td>
<td>61,231</td>
<td>61</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Ipswich City Council</td>
<td>23,907</td>
<td>23</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Logan City Council</td>
<td>16,895</td>
<td>17</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Redland City Council</td>
<td>12,246</td>
<td>12</td>
<td>2009</td>
</tr>
<tr>
<td>Urban</td>
<td>Bundaberg Regional Council</td>
<td>12,581</td>
<td>13</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Cairns Regional Council</td>
<td>9,317</td>
<td>9</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Gladstone Regional Council</td>
<td>8,069</td>
<td>8</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Mackay Regional Council</td>
<td>11,358</td>
<td>11</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>Moreton Bay Regional Council</td>
<td>19,672</td>
<td>20</td>
<td>2009</td>
</tr>
<tr>
<td></td>
<td>Rockhampton Regional Council</td>
<td>12,385</td>
<td>12</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Sunshine Coast Regional Council</td>
<td>15,249</td>
<td>15</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Toowoomba Regional Council</td>
<td>12,003</td>
<td>12</td>
<td>2009</td>
</tr>
<tr>
<td>Rural</td>
<td>Banana Shire Council</td>
<td>2,900</td>
<td>3</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Central Highlands Regional Council</td>
<td>4,556</td>
<td>5</td>
<td>2011</td>
</tr>
<tr>
<td></td>
<td>Cook Shire Council</td>
<td>1,943</td>
<td>2</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Maranoa Regional Council</td>
<td>1,596</td>
<td>2</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>North Burnett Regional Council</td>
<td>2,542</td>
<td>3</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Somerset Regional Council</td>
<td>4,601</td>
<td>5</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>Whitsunday Regional Council</td>
<td>1,679</td>
<td>2</td>
<td>2014</td>
</tr>
<tr>
<td></td>
<td>Total of 20 councils</td>
<td>310,134</td>
<td>310</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. The selection criteria to identify stratified sampling of Queensland local councils.

### 4.3 Data Collection Method and Analysis

An online survey was used to collect a wide range of data related to the study variables from the 20 councils as shown in the conceptual model (Figure 1). The survey questions were adopted from previous studies conducted by Davis (1989), Venkatesh and Davis (2000), Scott et al. (2016), and Teo et al. (1997). The questionnaire was pre-tested by four academic staff members to refine it prior to conducting a pilot survey of individuals who are similar to the targeted survey population.

The online survey was conducted by a third party organisation (My Opinions Pty Ltd), a market research company that offers online paid surveys. My Opinions is part of Survey Sampling International (https://www.surveysampling.com). From their extensive database of registered members, My Opinions recruited potential survey respondents based on the selection criteria: people 18 years or older, who use information technology and networks, and live in the areas as designated in the postcode targeted. My Opinions matched the required profile of respondents targeted and invited respondents by email with a URL link to the online survey.

The researchers selected an online survey, as opposed to alternative data collection techniques and interviews, because it can be sent to hundreds or even thousands of respondents. Furthermore, due to the time and funding constraints, it is more difficult to study all Queensland councils, as it can be challenging to find a convenient time to meet the respondents, and difficult to collect the data face-to-face from the sample, because the councils are widely spread across the state of Queensland.

The survey was conducted in July 2017. Responses will be transferred to SPSS and SPSS AMOS. Structural Equation Modelling will be used to test hypotheses and to identify the direct and indirect
effects between the constructs of the proposed model. The reliability of each factor will be calculated by the Cronbach alpha statistic. Confirmatory Factor Analysis will be used to test the validity of the model measurements.

5 Conclusion

The use of SMT is believed to be an important component of information technology in the public sector and has become a mainstream activity in private and business sectors. However, measuring the ability of SMT to interact with citizens to create public value is one of the key issues facing local government. The literature suggests that use of SM by local councils can contribute significantly to public value from the point of view of the citizens, who use SM initiatives implemented by the local council. The study focused on the public value of SM and the issues related to evaluating these terms.

While previous studies dealt with this issue using a number of frameworks and methodologies to evaluate the public value of e-government, there is a lack of research on evaluating the public value where SM tools are employed in government service delivery activity and interaction with their citizens. A proposed conceptual model was developed, based on existing theories and models, to assess the factors affecting the public value of SM in local councils in Queensland. The causality approach is adopted to show the causal relationships among the constructs of the model. A novel approach of outsourcing the data collection was used by employing a third party organisation (My Opinions Pty Ltd) to conduct an online survey. The sample targeted Queensland citizens who may use the SMT provided by local councils. The survey was conducted with 20 local councils.

A recognised limitation of this study is that there is a lack of published statistics on actual use of SM initiatives, and the actual percentage of use of these initiatives in Queensland local councils. Temporal, financial and access constraints restrict the scope of the research sample. However, it is hoped that the proposed conceptual model and survey instrument will be tested and further refined in the future in different fields and with different platforms of SM. This study is expected to make a theoretical contribution by enriching the current information systems literature with empirical evidence, and intends to open new avenues of knowledge in two different academic branches, namely public value and information systems.

6 References


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