

SOCIAL MEDIA RESPONSIVENESS IN THE PUBLIC SECTOR:  
A STUDY OF SOCIAL MEDIA ADOPTION IN THREE FUNCTIONAL  
DEPARTMENTS OF U.S. CITIES

by

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## ABSTRACT

Public administration research strongly supports the argument for administrator-citizen collaborations and shows that Web 2.0 social media tools have the potential to increase these collaborations. Some public managers have fully embraced the adoption of social media tools to their fullest collaborative potential while other managers have chosen to limit their full collaborative potential. This study examines four environmental influences to determine if they are the cause of the diverse levels of social media adoption among public administrators. A survey of 157 department managers from 261 large cities across the U.S. shows that 82% of the respondents are currently using some form of social media tools to engage citizens. The results show that perceived organizational influences and perceived administrator preconceptions of social media tools are having the greatest impact on the respondents' decision to adopt social media. Provided that response rate bias is not occurring in this study, there are two possible explanations for the results. One possible explanation is that Web 2.0 social media adoption may be following a similar path as the adoption of earlier forms of Web 1.0 e-government tools. The other possible explanation is that managers may be operating within a rational environment when deciding whether or not to adopt Web 2.0 social media tools.

This dissertation is dedicated to my family. I love you all so very much, and I hope I make you proud every day. To my mother and father, I want to thank you for always believing in me. Your support and sacrifices are the reason for all of the opportunities I have had in my Life. To Devlin, thank you for also believing in me and for all your patience, encouragement, and support. You challenge me every day to be a better person, and I am so glad to have you as a partner in my journey. To my niece Ashlyn, I am so glad God blessed us with you. You bring so much joy and laughter to me. I have enjoyed watching you grow into the beautiful person you are today, and I cannot wait to see the all the plans God has for you. Continue to follow your heart and your dreams, and I know you will accomplish many great things. I am always so very proud of you and will always believe in you. To my sister Amy, you are not only my sister but my first and longest friend. I could not have asked for a better sister or friend. Thank you for all the times you looked out for your little brother. To my extended family, Jeff, David, and Leah, I am so glad to call you my family. I cannot begin to tell you how much each of you inspires me. My only hope is that I am able to invest in you as much as you have given to me.

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## CHAPTER ONE: INTRODUCTION

*“It is the object of administrative study to discover, first, what government can properly and successfully do, and, secondly, how it can do these things with the utmost possible efficiency and at the least possible cost either of money or of energy.” – Woodrow Wilson, 1887*

Including citizens in administrative decisions is a current topic of study in the field of public administration. Even though it may appear to be a relatively new topic of discussion, it is arguably a branch of the much deeper rooted debate over the politics-administration dichotomy. Those who support the dichotomy stand upon their interpretation of Wilson’s essay as a call for the complete separation of politics from the administration of government. They see the public administrator’s role as one that should be solely focused on management expertise and the ability to professionally manage public organizations. On the opposing side are those who believe Wilson’s essay was not a call for the complete separation of administration from politics, but rather it is an appeal for the reformation of an out of control spoils system that was having too much impact on the administration of government. For them, public administration is an intermixture of politics and administration, and public administrators should have some “soft” involvement in policy making (Svara, 2008). There have been a number of movements working to define the administrative side of government and the roles administrators should play when interacting with citizens that have come from this debate (Bryson, Crosby, & Bloomberg, 2014).

Wilson noted in the late 1800’s, “It is getting to be harder to run a constitution, than to frame one” (1887: 200). Using this as a call to reform the administrative side of government,

many of the early theories in public administration focused on how to professionally manage public organizations. These early classical theories were less concerned with the inclusion of citizens in administrative decision- or policy-making and focused more on the efficient management of government resources and completion of tasks. Two theories coming out of this early classical period of public administration are Taylor's Principles of Scientific Management and Gullick's tasks for administrators. Taylor's Principles of Scientific Management sought economic efficiency by scientifically breaking work into its individual tasks and finding the most efficient method for completing each of these tasks. Gullick proposed a series of administrative tasks that he believed were necessary for the efficient administration of government. He placed these sets of tasks into the acronym POSDCORB, which when broken out stands for planning, organizing, staffing, directing, coordinating, reporting, and budgeting (Fry & Raadschelders, 2008).

With the ushering in of the progressive movement, the focus began shifting away from these highly rigid and task oriented theories. This allowed the concept of citizen participation to find a voice among public administration scholars. One early voice in this shift was Dewey (1927), who wrote that the achievement of a great society is one in which citizens and elected officials actively share in public concerns. However, it was not until the 1960's that this interest in citizen engagement received its strongest reinforcement with the passage of President Johnson's "Great Society" legislation. Included in this legislation was a requirement that "programs be developed with the maximum feasible participation of residents of the target areas" (Moynihan & Thomas, 2013: 787). The 1960's also saw the publication of Arnstein's (1968) ladder which offers an explanation for why public officials may resist including citizens in public

decisions. Each rung of her ladder represents a level of perceived zero-sum power sharing between those in government and the citizens they serve. As levels of citizen participation increase, public officials perceive that their own power decreases. As a result of this perceived zero-sum power struggle, there are those in government who are likely to forego the inclusion of citizens over concerns that it will decrease their own levels of power in the process (Arnstein, 1968).

The late 1980's and early 1990's ushered in the era of New Public Management (NPM) and reinventing government. This new era pulled public administration back toward a focus on professionally managing the organization. Osborne and Gaebler (1993) were strong proponents of NPM practices and shared their ideas in their book *Reinventing Government*. A public administrator adopting the NPM approach would view citizens as customers and seek private business best practices as a good method for serving citizens (Moynihan & Thomas, 2013). However, not everyone in public administration believes that NPM is the best approach to serve citizens, and by the turn of the century there were voices in public administration arguing that citizens should not be seen as customers nor should government be managed as a private business. For example, Denhardt and Denhardt (2000) and Vigoda (2002) argue that the best way to serve citizens is to "treat them like citizens." Once again, this shifted the focus of public administration practice back toward the inclusion of citizens. Therefore, the argument to include citizens in government is not a new argument, but rather it is an extension of a struggle that has been going on in public administration since the adoption of Wilson's essay as the foundation for public administration.

### Background to this Study

Why is it important to include citizens? Public administration research has a rich foundation for the importance of including citizens. First, it helps to ensure that they have the necessary information and platform for sharing their views on community problems and solutions (Bingham, O’Leary & Carlson, 2006; Cooper, Bryer & Meek, 2006; Robbins, Simonsen & Feldman, 2008). According to Roberts (2004), citizen participation is the cornerstone of any democracy as it helps to keep the community life vital and public institutions accountable. Including citizens helps to ensure that their interests are represented (Cooper, et. al., 2006), increases their trust in government, increases their ability to bring about change, and leads to a more responsive government (Bryer, 2011). Additionally, direct involvement of citizens promotes their active public spirit and moral character, educates them about democracy and democratic ideas, provides psychic rewards, including the sense of belonging to a community, adds legitimacy to the public decisions, protects citizens’ freedoms, and provides citizens with a voice for challenging existing power structures (Robbins, et. al., 2008). Including citizens builds government trust in them, increases their efficacy and trust in government, increases citizen competence in government, and leads to better government responsiveness and legitimacy. When included, citizens’ faith in government will continue to grow and the belief that their actions have an impact upon the actions of political leaders. It will also allow citizens the ability to make good decisions by giving them the information they need to make educated decisions (Cooper et. al., 2006).

Perhaps one reason this exchange between administrators and citizens has drawn so much recent attention is due to the fact that public administrators not only carry the burden of

managing the daily operations of government, but they also face the increasing challenge of finding solutions to society's "wicked problems" (Roberts, 2004). A wicked problem is one in which there is disagreement in how to define it, varying and often competing solutions to these problems based on stakeholder points of view, and constantly changing constraints while administrators try to find solutions (Roberts, 2001). Since there are a number of competing stakeholders trying to define these problems (Roberts, 2004) and public administrators carry the burden of balancing the demands of these multiple actors (Bryer, 2006; Cooper & Bryer, 2007; Handley & Howell-Moroney, 2010), it is extremely important that administrators create avenues for administrator-citizen collaboration.

For many practitioners and citizens, their concept of citizen involvement is limited to political participation (e.g., voting for a political candidate) or volunteering in civic affairs. However, now more than ever, it is critical that public administrators work to broaden this concept of public participation so citizens become more active in administrative decision-making and management processes at the administrator-citizen level (Yang & Pandey, 2011). Unfortunately, it is often found that most practitioners rarely offer any meaningful level of citizen participation. Instead, they opt for shallow participation efforts after the issues are framed and decisions have been made (Yang & Callahan, 2007). There is, however, renewed hope for meaningful administrator-citizen interactions (Yang & Callahan, 2007), and it is believed that Web 2.0 social media will become the tool through which people can achieve this collaboration (Bryer & Zavattaro, 2011). It is perhaps the collaborative potential seen in these tools that has rekindled the debate for citizen participation.



Broadly defined, Web 2.0 social media tools are information and communication technologies (ITCs) platforms (Nam, 2012) such as blogs, wikis, Facebook, web-based communication spaces (e.g., chat rooms), audio, photo and video sharing, virtual worlds, Twitter, etc., and through these tools citizens share in creating and organizing Web content (Bryer & Zavattaro, 2011; Chun, Shulman, Sandoval & Hovy, 2010; Nam, 2012). Unlike earlier forms of Internet based interactions between government and citizens known as e-government or Web 1.0 platforms (e.g. government websites) that only allowed for one-way communications and limited forms of citizen feedback (Aldrich, Bertot, McClure, 2002; Ho, 2002), Web 2.0 platforms allow citizens to collaboratively create the data and information that is shared over the Internet (Chun et. al. 2010; Hand & Ching, 2011; Nam 2012). As the interaction with these technologies becomes a daily norm (Scott, 2013), citizens have the ability to better connect to government information, join online public communities, and help to collaboratively create solutions and deliverables (Lee & Kwak, 2012) than at any point in history.

There is a great deal of cutting-edge research that examines how these tools can facilitate administrator-citizen interactions. Most of the existing research can be placed into four main themes: (1) identifying the types of social media that are being adopted; (2) identifying how they are being used; (3) explaining the benefits to citizens; and (4) sharing the challenges and best practices from social media implementation (e.g., Brainard and Derrick-Mills, 2011; Bryer and Zavattaro, 2011; Hand and Ching, 2011). However, there is little available research that identifies or offers an explanation for why a public administrator chooses to adopt (or not adopt) Web 2.0 social media tools, or why there is such a diverse level among managers when they do adopt social media. Some managers have fully embraced the adoption of social media tools and

implemented them to their fullest collaborative potential. However, other managers have opted to limit their full collaborative potential and make them more like earlier Web 1.0 platforms (Bryer & Zavattaro, 2011). This study seeks to understand the reason for this adoption diversity among public administrators.

### Purpose of this Study

Identifying the causes of these diverse levels of implementation among public administrators needs to be explored. Based on the importance of citizen participation and the collaborative potential of fully implemented social media tools, this study seeks to identify the environmental and personal influences that have an impact on an administrator who is deciding whether or not to use social media to engage citizens. Understanding these influences is arguably key to the adoption of fully collaborative social media tools. Governments wishing to adopt social media to engage citizens can review all of the existing social media use and best practices research, but none of this research will help if their environments are not conducive to adoption of social media tools. Therefore, the ultimate goal of this research is to develop a model that can be used to explain how internal and external influences impact levels of social media adoption by public administrators. To begin this exploration, this study looks at six key research questions:

1. What are the perceived internal and external environmental influences an administrator is considering when deciding whether or not to implement a social media program?
2. Are there any influences that are perceived as more important than others?
3. How do administrator preconceptions of public participation and social media tools impact levels of social media adoption?

4. What impact do organizational resources have on the decision to adopt social media?
5. What impact does the public have on social media adoption?
6. What impact do politicians have on social media adoption?

### Organization of Study

The remaining chapters of this study are organized as follows. Chapter Two reviews the existing literature to: (1) identify the influences that impact administrative decisions, (2) identify the varying levels of social media adoption, and (3) construct possible relationships that exist between these influences and the levels of social media adoption. Based on the literature reviewed, the following three models are also presented in Chapter Two: (1) Four Proposed Influential Categories on Administrator Responsiveness; (2) Four Levels of Social Media Adoption; and (3) Proposed Environmental Influences to Social Media Adoption. Chapter Three discusses the methodology that is used to assess these three proposed models, and Chapter Four analyzes the data collected from an online survey, explains the breakdown of the internal and external influences among the three surveyed departments, and how these influences relate to various levels of social media adoption. Finally, Chapter Five summarizes the research findings and makes recommendations for future research and for creating administrative environments that are more likely to lead to higher levels of social media adoption.

## CHAPTER TWO: LITERATURE REVIEW

### Introduction

This dissertation seeks to identify the perceived internal and external environmental influences that shape a public administrator's decision on whether or not to adopt social media tools for engaging citizens. This chapter examines the literature in two areas of previous research in order to identify possible answers to the research questions. These two previous areas are administrative responsiveness and the adoption of technology into public organizations. Administrative responsiveness is selected because it examines environmental influences to understand their impact on administrative policy decisions and role perceptions of actors in these decisions by public administrators. This includes the perceived roles citizens should play in administrative decisions (e.g., Arnstein, 1968; Bryer, 2006; Handley & Howell-Moroney, 2010; Stivers, 1994; Vigoda, 2002; Yang & Callahan, 2007; Yang & Pandey, 2011). Examining existing responsiveness research should help to identify the environmental influences that impact social media adoption policy.

There are two reasons for reviewing the previous literature on the adoption of technology into public organizations. First, although this previous literature does not use the term "responsiveness," it does help to explain how perceived influences impact an administrator's decision to adopt technology, and it helps to identify the environmental impact on social media adoption. Second, it identifies levels and explains stages of technology adoption into public organizations in the past. This information should help to identify the various levels of social media adoption (e.g., Chun et. al., 2010; Layne & Lee, 2001; Lee & Kwak, 2012; Nam, 2012).

This chapter divides the literature review into five sections. The first section offers a definition for responsiveness as it is conceptualized in this study. The second and third sections examine four previous studies to help identify the possible influences on social media adoption and place them into a conceptual model. The fourth section examines two previous studies to identify and define levels of Web 2.0 social media adoption by public administrators. The final section combines the influences on social media adoption with the levels of social media adoption to create possible administrative environments and the proposed levels of social media adoption based on these environments.

### Defining Responsiveness

An important first step in this study is to conceptualize the term “administrative responsiveness,” as it has the potential to be a very ambiguous and all-encompassing term (Stivers, 1994; Yang & Pandey, 2007). For example, in a political science context, citizen responsiveness could be viewed as a politician’s response to citizens’ demands by voting a certain way on a policy issue. From a business administration perspective, it may examine the way businesses react to customers’ demands via market changes (Yang & Pandey, 2007). Even within a public administration context, responsiveness to citizens can include several definitions. For example, it can be public administrators responding to citizens as customers or partners, or it can simply include how they professionally manage public organizations (Vigoda, 2002; Yang & Pandey, 2007). For the purposes of this study, the term “responsiveness” is limited to those actions that occur within the public arena at the administrator-citizen level (Yang & Pandey, 2011). It is the “willingness of administrators to participate with citizens in the collaborative

process,” (Bryer, 2009:272) and more specifically, the willingness of administrators to adopt social media tools that encourage collaborative citizen participation.

Collaborative participation is also important to defining responsiveness in this study, as someone might look at the word “responsive” and think of an administrator operating in merely a reactive nature (e.g., a manager responding to the demands of customers). However, collaborative responsiveness refers to a partnership with citizens (Vigoda, 2002) in the administrative decision making and management processes (Yang & Pandey, 2011). Citizens and administrators are interacting in a genuine partnership to collaboratively make decisions and not just in a unidirectional information-sharing participation level (Wang, 2001). The administrator is sharing information with and listening to citizens (Stivers, 1994). Therefore, for this study responsiveness is classified as administrator-citizen responsiveness.

In further defining administrator-citizen responsiveness, it is also important to recognize that the administrator is heavily influenced by multiple, and quite often competing, stakeholder demands that impact his or her level of responsiveness to citizens (Yang & Pandey, 2011). Handley and Howell-Moroney (2010) suggest that public administrators tend to rank order their responsiveness to those stakeholders with whom they believe to be most accountable. Therefore, they will only actively engage citizens when the administrator sees them as the stakeholder group to whom they are most accountable. If, however, the administrator believes he or she is more accountable to professionally managing the organization in order to maintain a higher level of trust with elected politicians, then they are more likely to be responsive to the organization, upper level managers, or politicians rather than the need to actively engage citizens (Handley & Howell-Moroney, 2010). In this situation, administrators see themselves as appointed technical

experts, and their responsiveness to citizens is achieved by professionally managing the public organization and not by engaging them in face-to-face administrator-citizen interactions (Stivers, 1994).

### Identifying the Perceived Influences on Public Administrator Responsiveness

The second step of the literature review is to identify the perceived influences that shape administrator responsiveness when it comes to social media adoption. There are arguably two decisions occurring when an administrator is trying to decide whether or not to adopt social media to engage citizens. The first decision is determining what level of engagement citizens should play in the decision making process, and the second decision is whether or not online social media tools should be used for this interaction. While examining the previous research, four overarching categories seemed to stand out as having the most impact on an administrator's decision to include citizens or adopt technology. These four categories are political influences, organizational influences, administrator influences, and public influences. The following four studies help identify and explain these influences.

#### *First Study: Bryer's Six Environments of Responsiveness*

Bryer (2006) explains public administrator responsiveness through three main ethical perspectives: control-centered ethics, discretionary ethics, and deliberative ethics. Within each of these ethical perspectives are environments that shape administrator-citizen responsiveness. These perspectives and environments can be placed on a continuum that goes from an administrator who is more organizationally focused to one that is more collaboratively focused

(Figure 1). In the control-centered perspective there is very little trust in the administrator to carry out the wishes of the elected officials on their own. Therefore the administrator's responses are either dictated by elected officials or constrained by the rules that are put in place within the organization (Bryer, 2006). Under these influences the administrator would be highly focused on managing the organization from a perceived need to please the elected officials or their desire to follow the organization's rules and culture (Bryer, 2006; Handley & Howell-Moroney, 2010).

Under the discretionary perspective the decision making power can be seen as shifting from the politician or the organization and towards the administrator who then bases his or her decisions on what he or she perceives as best for managing the organization. Bryer (2006) notes that administrative responsiveness falls into two categories under this perspective:

entrepreneurial or purposive. It is in between these two categories that one can begin to see the transitioning from a strict management focus to a collaborative focus. Under the purposive response the administrator manages the organization based upon the professional or public goals he or she sees as necessary to meet the greater need of the public. Finally, under the entrepreneurial response the administrator is managing as if they are serving customers by adopting the ideas of new public management (NPM), such as strategic planning, quality improvement, management-by-objective, and benchmarking (Bryer, 2006).

The final perspective Bryer (2006) presents is deliberative. This perspective seems to transition an administrator into the highest level of collaboration and makes them responsive to both citizens and the other multiple stakeholders external to the organization. Whereas in the first two categories the administrator was focused primarily on political influences or professionally managing the organization, in this category the administrator is working to build a mutual



decision. The deliberative perspective is also further divided in two sub-categories: collaborative and negotiated. In a collaborative response the administrator is working to build consensus among all the stakeholders (including citizens). Under the negotiated response the administrator is working with all the stakeholders, internal and external, to again build consensus in decisions. (Bryer, 2006).

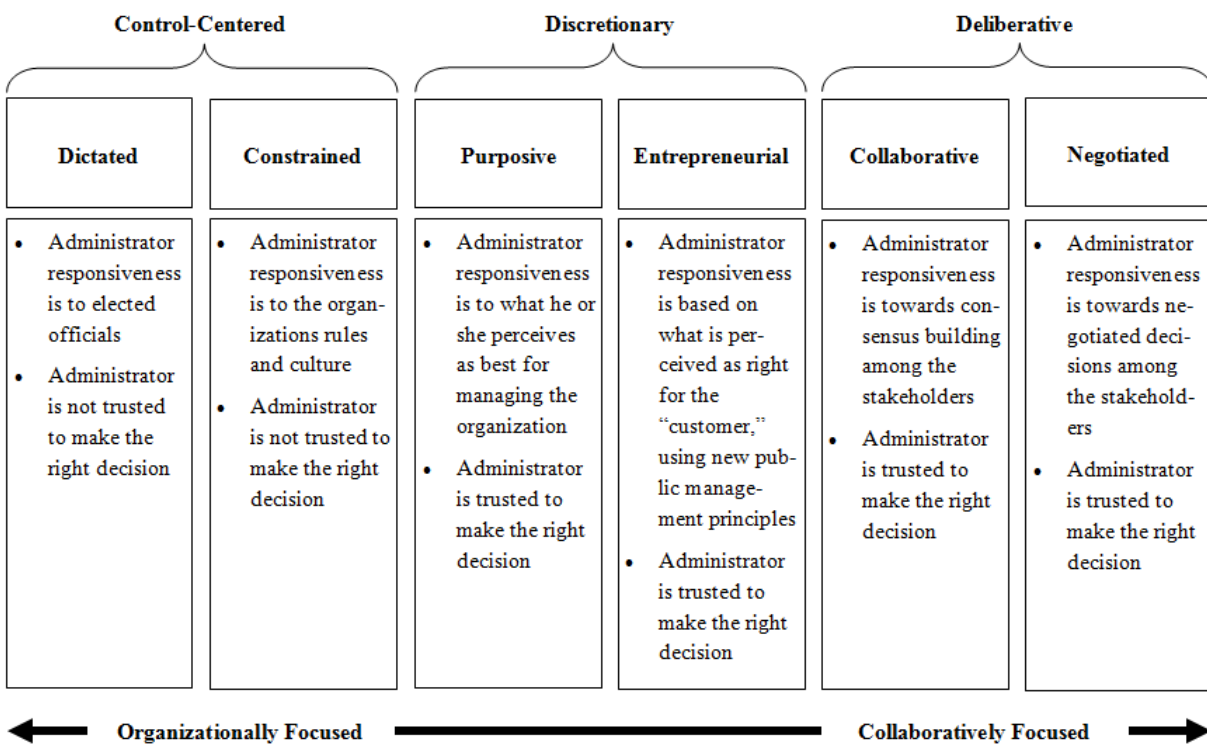


Figure 1: Bryer's Six Environments of Responsiveness

*Second Study: Yang and Pandey's Environmental Influences on Administrator Responsiveness*

Yang and Pandey (2007) explain administrative responsiveness through external political environments and internal organizational factors (Figure 2). Elected officials, public and media influences, and client groups are placed under external environmental influences.

Decentralization and results based management are placed under internal organizational influences. They argue that elected officials have the highest external influence (Yang and Pandey, 2007), and similar to Bryer (2006), they state that trust is a key factor of public responsiveness and “extreme distrust may hinder agencies’ capacity to fulfill their mission” (Yang & Pandey, 2007:220). They show that administrators with a higher level of support from elected politicians are more likely to have a higher level of responsiveness to citizens. More support is also correlated with higher levels of trust in the administrator to manage his or her department. This gives the administrator a greater level of freedom to make decisions. Elected officials, who trust and support their administrators, are also more likely to go along with the administrator’s recommendations (and in some cases increase funding support). The administrator is not constantly seeking approval from politicians regarding decisions, and therefore, they have a higher degree of freedom to be more responsive to the citizens (Yang & Pandey, 2007; Yang & Pandey, 2011).

Public and media influences also have a positive correlation with administrator responsiveness. When the public and the media are more involved, they have a higher ability to exert greater influence over the public administrator. For example, when the public and the media are involved, the administrator’s decisions are not as easily hidden from the public and administrators are more likely to consider public reaction before making a decision. Citizens and administrators begin to develop shared understanding and trust, and as a result, administrators see citizens as equal partners in policy making and goal setting. The more involved citizens become in the process or the more exposed the administrator is by media attention, the higher their level of responsiveness will be to the public (Yang & Pandey, 2007). The public may also

be consumers or users of public goods and services, and a higher consumer influence can lead to higher responsiveness. However, they do note that strictly responding to customers can lead to neglected responsiveness to politicians and citizens (Yang & Pandey, 2007).

Organizational influences come from an organization's culture and rules. The more decentralized the culture, the higher the ability of the public administrator to respond to citizens. However, the more centralized and formally structured the organization, the lower the ability of the public administrator to respond (Yang & Pandey, 2007). This is further supported by a more recent study conducted by Yang and Pandey (2011). In their newer study they found that the more bureaucratic and hierarchal the organizational structure, the less conducive it is for engaging citizens in administrative decisions. An administrator not constrained by the rules of the organization, or working in an environment that is more decentralized, experiences higher levels of freedom to make decisions just as administrators with strong political support (Yang & Pandey, 2007). Yang and Pandey (2007) also found a curvilinear correlation between the addition of NPM techniques and administrator responsiveness. This means that adding these techniques will only improve responsiveness to a point. Adding more NPM techniques beyond that point begins to have an adverse effect on responsiveness (Yang & Pandey, 2007).

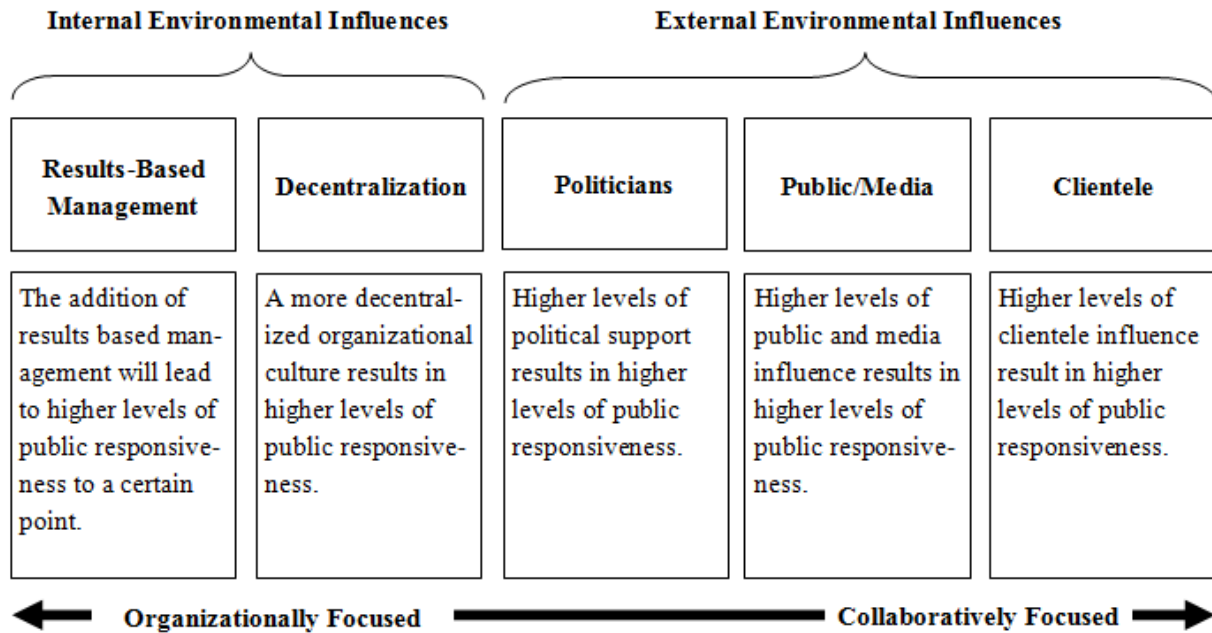


Figure 2: Yang and Pandey's Influences

*Third Study: Jun and Weare's Motivations for the Adoption of Technology*

Jun and Weare (2011) do not use the term “responsiveness,” but they do show various institutional motivations that influence the adoption of websites and e-government services. Their work is included because it supplements the responsiveness work conducted by Bryer (2006) and Yang and Pandey (2007), and it helps to identify the environmental influences that may impact an administrator’s decision to adopt social media. Based on Jun and Wear’s (2011) research, the adoption of technology comes from internal and external managerial, technical, and institutional influences (see Figure 3). They examine the adoption of technology from an enterprise level, but their findings can be applied at a department level.

A public manager responding to technical influences, whether they are internal or external, is considering whether or not the adoption of technology will make some internal or

external process (e.g. communications) more efficient than in its current state. Under a technical influence an administrator is more likely to adopt a new technology, such as e-government and websites, when they believe it can improve internal communication flows, communications with citizens, or communications to partnering organizations. The administrator making a decision based on what he or she thinks is in the best interest of his or her department, therefore, this is placed under the administrator influence category (Jun & Weare, 2011).

Under the managerial category, administrators are responding to departmental competition and the distribution of scarce resources internally and multiple stakeholder influences externally (Jun & Weare, 2011). Internal influences are categorized as organizational influences. For example, if the adoption of technology has an impact on the distribution of resources and power within the organization, administrators may not be as ready to adopt new technology. Managers may also be hesitant to adopt a new technology if the adoption of technology requires them to restructure their departments, reprioritize or give up some money in their budgets, shift or reduce department resources, or give up some of their authority to another person or department (e.g., IT department). There could be mixed acceptance from departments at the enterprise level (Jun & Weare, 2011).

Managers with no faith in technology (Moynihan & Lavertu, 2012) may resist the adoption of technology, while at the same time there can be strong support seen from IT departments. A department manager could just as easily experience a similar mixed resistance and excitement from their staff. Staff who are less comfortable with the technology could be resistant and staff more comfortable with technology push for it. Jun and Weare (2007) place elected officials with external stakeholders. An administrative response in this environment is

based on which stakeholder has the most influence on the administrator (Handley & Howell-Moroney, 2010; Jun & Weare, 2011).

Administrators responding to institutional influences are internally concerned with the legitimacy of their organizations, and externally they are responding to information from vendors about their product and how it can improve their organizational performance or delivery of goods and services (Jun & Weare, 2011). Internal institutional influences are placed into the organizational category. External institutional influences are placed into the public category. Administrators responding to internal institutional influences are concerned with how their organization appears to those outside. The pressure to adopt technology can also come from coercive, mimetic, or normative isomorphism (DiMaggio & Powell, 1983; Jun & Weare, 2011).

As stated above, external institutional influences come from vendors, and the adoption of their technology is based on how strong of an influence the vendor has on the administrator. An administrator who has a high level of trust in the information they are receiving from the vendor is more likely to adopt that technology product. However, an administrator who is more skeptical of what the vendor is sharing with them is less likely to adopt their product.

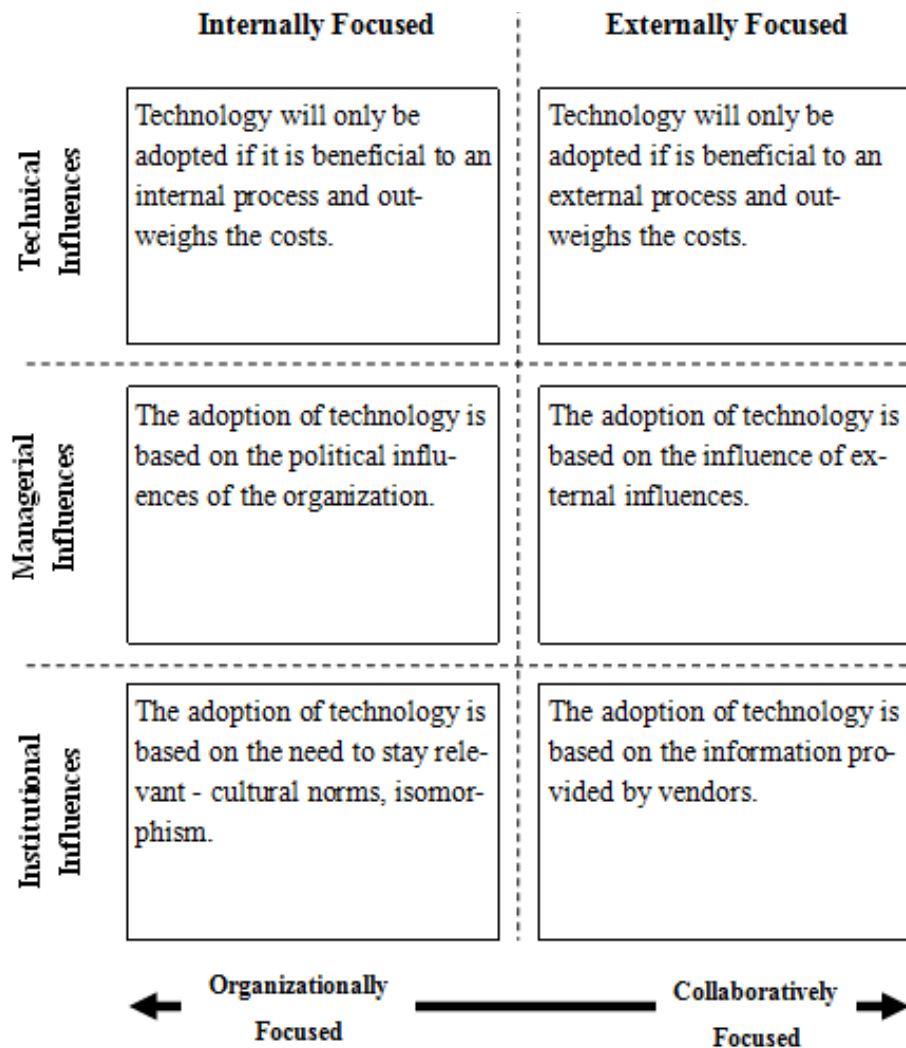


Figure 3: Jun and Weare's Responses Placed into Four Environments

*Fourth Study: Moynihan and Lavertu's Cognitive Biases in the Adoption of Technology*

The Moynihan and Lavertu (2012) study focuses on an administrator's cognitive biases. Their study examines administrator preferences for adopting touchscreen voting machines over traditional paper ballots. Although this study was not focused on the adoption of social media and did not use the term "responsiveness," it is included in this review because it examines how

the administrator's own biases impact his or her decision to adopt new technology for their department. The study included administrators who were using various voting methods, including methods that were already using touchscreen voting machines. They found that the administrator's own faith in technology, their attachment to the status quo, and confidence in their own judgment have an impact on their preference to use technology (see Figure 4). They note in their findings that most administrators prefer to stay with the status quo, even when they had a high faith in technology or confidence in their knowledge of touchscreen voting machines. The desire to stay with the status quo is most likely due the fact that any perceived costs outweighed the benefits of implementing a new voting system. They also found that administrators will try to reinforce their decision by only seeking out or listening to the information that supports this decision (Moynihan & Lavertu, 2012).

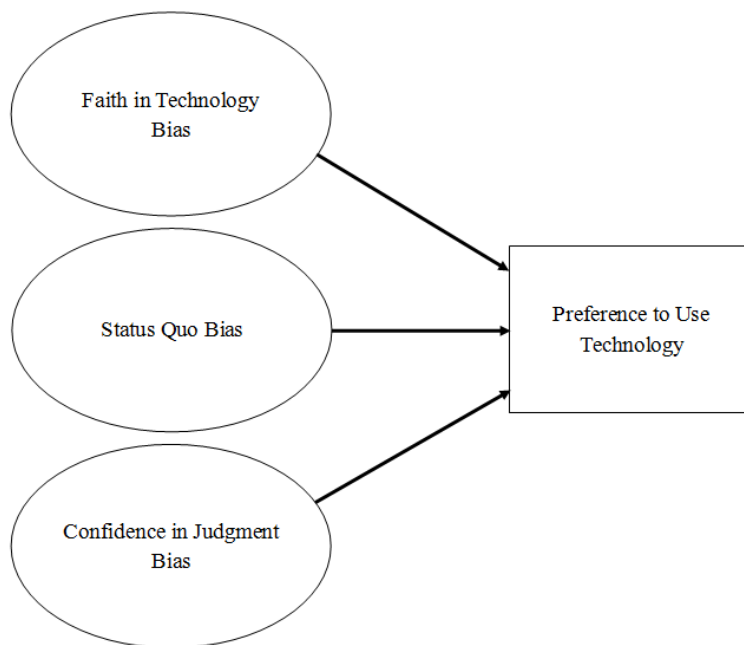


Figure 4: Moynihan and Lavertu's Administrator Cognitive Biases



### Four Influential Categories on Administrator Responsiveness

The internal and external environmental pressures presented in the studies above are combined to create four proposed influential categories that impact an administrator's decision to include citizens and whether or not to adopt social media as a tool to interact with them. These four categories are: perceived political trust, perceived organizational structure, perceived administrator preconceptions, and perceived public influence (Figure 5). It is proposed that these four perceived influences create the environments that shape administrator-citizen responsiveness and ultimately determine the levels of social media adoption to engage citizens. They are labelled "perceived" because it is how the administrator perceives the environment and not necessarily the true nature of the environment. There is much debate in the literature about the advantages and disadvantages to using perceived measures rather than objective measures. However, using perception should provide the ability to capture a manager's internal psychological processes in their decisions and behaviors (Yang and Pandey, 2009). As Handley and Howell-Moroney (2010) suggest, administrators will respond to each influence based on their perceived level of importance.

This model is unique from the earlier models in that it combines administrative responsiveness and adoption of technology together in order to create one new model that connects public environmental influences to levels of social media adoption. There is very little existing research on what causes an administrator to adopt various levels of social media adoption. Most of the existing public administration research in the area of social media adoption focuses primarily on how the tool is being used and what types of tools are being used. Due to the limited amount of research in the area of administrator perceptions to social media adoption,

this study relies upon two separate areas of previous research in order to create this model. The newly combined model is explained below.

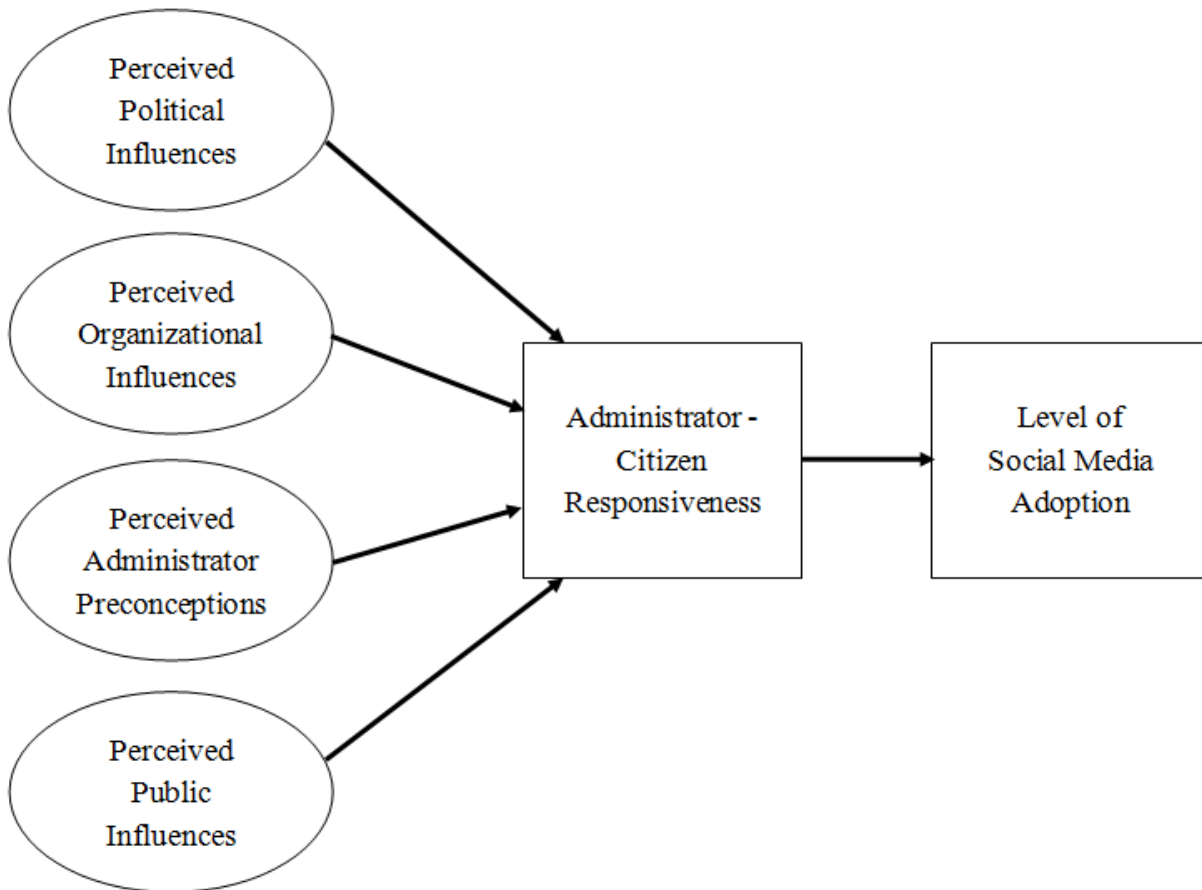


Figure 5: Four Influential Categories on Administrator Responsiveness

*First Proposed Influence: Perceived Political Trust*

The first proposed overarching category that influences an administrator's decision is perceived political trust. This influence was identified in Bryer's (2006) dictated responses, Yang and Pandey's (2007) political influences, and the political stakeholders identified in Jun and Weare's (2011) external managerial influences. Political influences comes from elected officials (e.g., city council or mayor), depending on the style of government (Yang & Pandey, 2011). As

Yang and Callahan (2005) note, elected officials have significant power over administrators, as they have the ability to set policies and work with administrators as a team. In some cases administrators work directly for and at the pleasure of the governing body, and therefore, many of their actions are highly tied to the support or control of those elected officials (Yang & Callahan, 2005).

“Public managers perceive the actions of elected officials as signals of trust or distrust, satisfaction or dissatisfaction,” which in turn leaves them feeling motivated or frustrated (Yang and Pandey, 2009: 336). A manager not trusted to manage the organization by their own abilities will most likely find their decisions strongly controlled by the direct influences of the political principals (e.g., elected officials or chief executives). Additionally, this high level of distrust and control inhibits the administrator’s flexibility to include citizens or adopt technology in the way they see best (Bryer, 2006; Yang & Pandey, 2007). Therefore, they become cynical or defensive and cling to the rigid bureaucratic rules and procedures (Yang and Pandey, 2011). Likewise, elected officials who strongly believe in the mission or program of a particular department will most likely be strong advocates for those departments. This can mean higher trust and support in the department. This can lead to higher innovation and positive outcomes (Meier, 2000; Yang & Pandey, 2007; Yang & Pandey, 2009). It can also mean a higher level of autonomy given to the manager to run the department as needed to accomplish its mission (Yang & Pandey, 2009).

*H<sub>1</sub> – A manager with a perception of higher levels of political trust should lead to higher levels of social media adoption.*

### *Second Proposed Influence: Perceived Organizational Culture*

The second proposed overarching category that influences an administrator's decision is perceived organizational culture. This also has the potential to be a strong barrier to citizen participation (Yang & Pandey, 2011). Perceived organizational culture is identified in Bryer's (2006) constrained responses, Yang and Pandey's (2007) organizational influences, and Jun and Weare's (2011) internal management and internal institutional influences. Just as political influences can impact a manager's flexibility and innovativeness, they can also be influenced by the organization's culture (Stazyk & Goerdel, 2011). According to Cook and Rousseau (1988), culture is a "set of cognitions shared by members of a social unit" (p. 247), and in this case the social unit being an organization. An organization's culture can be measured by its "artifacts, values, and assumptions that are shared by the members of the organization, as well as the symbols in use by the organization" (2011: 351), and through the activities and interactions of the employees, such as decision making and communications (Cook & Rousseau, 1998). As these symbols and values are adopted by more and more people within the organization, the stronger they become and the harder it is for administrators to respond or make decisions in ways that do not align with this strong culture (Bryer, 2006). A manager will only be as innovative towards new ways of engaging citizens as the culture of the organization allows him or her to be (Stazyk & Goerdel, 2011).

Autonomy and decentralization also impact the manager's perceived ability to make his or her own decisions for their department. This sense of power can come from political trust, as shown above, but it can also come from organizational leadership (Seppälä, Lipponen, Pirtilla-Backman, & Lipsanen, 2011; Yang & Pandey, 2009). Influences from the organizational

leadership are separated from political influences in this study because many public organizations have a senior level management structure (e.g., city manager, chief administrator, deputy city manager, or an oversight board) in addition to the elected officials. Organizational leadership has the ability to use control mechanisms that define levels of manager autonomy within their departments. Managers with higher levels of autonomy will be given higher levels of decentralized control (Seppälä, et al., 2011). A more decentralized structure is more likely to have higher organizational performance (Moynihan & Pandey, 2005), as well as managers who are empowered to “take initiative and respond to the changes of environment and citizen preferences” (Yang & Pandey, 2007: 221).

However, this power to independently manage can also be taken away if that trust is betrayed (Seppälä, et al., 2011). An organization that is more centralized or highly focused on results based management techniques, such as strategic planning, performance management, customer service, quality improvement, management by objective, and benchmarking (Brundey & Wright, 2002; Jun & Weare, 2011; Salamon, 2002; Yang & Pandey; 2007), would have influences that sway the administrator to respond more towards the organization. Responsiveness to the organization would then become the administrator’s priority (Bryer, 2006; Handley & Howell-Moroney, 2010).

Organizational resources can also have a strong influence on the administrator’s decision to adopt new technologies because the adoption of technology raises questions about the support and control of resources (Jun & Weare, 2011; Pendersen, 2005). The adoption of social media is going to require financial and technological resources. A manager adopting these technologies must perceive that they will have access to the necessary support, assistance, financial and

technological resources, and the software, hardware, and network services that are going to be required to use this new technology (Pendersen, 2005). If the manager thinks that he or she does not have the necessary resources or may lose some of his or her department resources to the information technologies (IT) manager, they may decide the adoption of social media is not worth it (Jun & Wear, 2011). There are three hypotheses that are proposed from this perceived influence.

*H<sub>2a</sub> – A department with a manager who perceives a more decentralized organizational culture should show higher levels of social media adoption.*

*H<sub>2b</sub> – A department with a manager who perceives a more innovative organizational culture should show higher levels of social media adoption.*

*H<sub>2c</sub> – A department with a manager who perceives higher organizational resources should show higher levels of social media adoption.*

### *Third Proposed Influence: Perceived Administrator Preconception*

The third proposed overarching category that influences an administrator's decision is perceived administrator preconception. This influence was identified in Bryer's (2006) discretionary ethical influences, Jun and Weare's (2011) technical influences, and Moynihan and Lavertu's (2012) cognitive biases. Unlike the other influences, these influences are internal to the manager. It is a personal perception of how they view social media tools, how they see their role as a manager within the organization, their relationship to citizens and other stakeholders in government, as well as what role they believe citizens should play in administrative decisions (Bryer, 2009; Bryer, 2011; Handley & Howell-Moroney, 2010). Under this influence the

administrator sees himself or herself as the technical expert who has been hired to manage their department. Their decision to include citizens is based on their perception of responsiveness to the other three influences (political, organizational, and public) (Bryer, 2006; Yang & Pandey, 2007). Their decision to include citizens and adopt technology is based on their perceived ability to innovate (Lu, Yao & Yu, 2005), their level of comfort with technology, including pressure from peers or those influencing them to adopt technology (DiMaggio & Powell, 1983; Pendersen, 2005), their trust in the participation process, and their own willingness to promote citizen participation activities (Yang, 2006).

Managers who have a high trust in the participation process and believe that citizens should be included in functional decisions are more likely to support programs that engage citizens (Yang, 2006). Moreover, managers who are more comfortable with the technology, or see themselves as innovators, are also more likely to see the possibilities and benefits of using technology and to adopt them to interact with citizens. However, managers who believe that it is elected officials' business to initiate citizen participation programs are most likely not going to adopt programs, social media or otherwise, that engage citizens (Lu et. al., 2005, Penedersen, 2005; Yang, 2005). Also, an administrator who feels uncomfortable with the technology may opt for a decoupled response based on the perceived political and organizational influences.

Decoupling is defined as “a distinction between the formal structure of an organization and its actual day-to-day activities” (Lines, 2005: 109). When decoupling occurs within an organization, there are two sets of processes that emerge. There is one internal process for the production of goods and services and another process that is displayed for those outside of the organization (Lines, 2005). This means that social media is likely to be adopted symbolically for external

appearance, but has no real impact on the day-to-day operations of the department. This is due to the fact that administrators do not want to give up a perceived level of power or resources for the adoption of technology (Arnstein, 1968; Jun & Weare, 2011) so they end up balancing the technology policies of the organization for what they perceive as good management of their department (Fiss & Zajac, 2006). There are three hypotheses that are proposed from this perceived influence.

*H<sub>3a</sub> – A department with a manager who has a higher faith in technology should show higher levels of social media adoption.*

*H<sub>3b</sub> – A department with a more innovative manager should show higher levels of social media adoption.*

*H<sub>3c</sub> – A department with a manager who has higher faith in the participation process should show higher levels of social media adoption.*

#### *Fourth Proposed Influence: Perceived Public Influences*

The final proposed overarching category that influences an administrator's decision is perceived public influences. This influence was identified in Bryer's (2006) deliberative ethical influences, Yang and Pandey's (2007) public influences, and Jun and Weare's (2011) external managerial and external institutional influences. An administrator responding under this influence is responding to perceived direct influences from public stakeholders and clientele outside of the organization (Yang & Pandey, 2007). There is some overlap between this influence and the previous perceived administrator preconceptions influence, as trust in the participation process and their own willingness to promote citizen participation activities can be



influence by interactions with citizens. However, the distinction of perceived public influences is that the administrator is basing his or her trust on their past experiences engaging citizens and whether or not citizens have enough knowledge to make valuable contributions. Another difference here is that under the previous perceived administrator preconceptions administrators are looking at the actual participation process itself and not their previous experiences. Under public influences the administrator is also being influence by what he or she is hearing from the public or the media (Yang, 2006).

An administrator's trust in citizens' ability to make valuable contributions strongly impacts his or her willingness to involve them. For example, administrators may question citizens' knowledge of the issues or governing processes. If they believe that citizens are not well informed, then they are less likely to place trust in their ability to contribute in a meaningful way (Yang, 2006; Yang 2009). As citizens become more active in the process, administrators may begin to see them as equal partners and begin to include them in the collaborative process (Bryer, 2006; Yang & Pandey, 2007). This inclusion can lead to greater trust between citizens and government, as well as greater influence and an increase in department response (Yang & Pandey, 2007). The public administrator also perceives that they are more accountable to citizens and seeks to include them in the decision making process as collaborative partners. This greater accountability to citizens in turn leads to greater citizen participation (Handley & Howell-Moroney, 2010). There are three hypotheses that are proposed from this perceived influence.

*H<sub>4a</sub> – A department with a manager who has had good prior engagements with citizens should show higher levels of social media adoption.*

*H<sub>4b</sub> – A department with a manager who perceives citizens as having the knowledge to engage in the deliberative process should show higher levels of social media adoption.*

*H<sub>4c</sub> – A department with a manager who is highly influenced by the public/media should show higher levels of social media adoption.*

### Public Organization Social Media Adoption

Building on the definition from Chapter One, social media includes technologies that facilitate social interaction (Bryer & Zavattaro, 2011). These technologies include blogs, wikis, Facebook, web based communication spaces (e.g., chat rooms), audio, photo and video sharing, virtual worlds, Twitter, etc. (Bryer & Zavattaro, 2011; Chun et. al., 2010; Nam, 2011; Scott, 2013). Earlier forms of e-government are often called Web 1.0 and only offer unidirectional interactions between citizens and government. HTML pages are created and coded by government employees in order to provide one-way information to citizens. Citizens then surf these HTML pages and select the content they wanted to view (Scott, 2013). Social media platforms are called Web 2.0 because citizens now have the potential to become active contributors to the online decision making and help co-create the web page content (Bryer & Zavattaro, 2011; Nam, 2011).

However, simply implementing a Web 2.0 platform does not necessarily mean it will lead to social interaction. These tools can be manipulated by public administrators to encourage or discourage certain activities (Bryer & Zavattaro, 2011). For example, an administrator can implement a Facebook page that allows for full citizen participation or can choose to limit citizen engagement similar to earlier Web 1.0 unidirectional information sharing. Therefore, a better

definition for social media, according to Bryer and Zavattaro (2011), is “technologies that can be and are manipulated to lead to certain activities, but which may not after implementation have any social component whatsoever” (2011: 327). Since these tools are Web 2.0 based, the term “social media” implies a Web 2.0 platform. However, simply adopting social media does not guarantee that they will lead to full collaborative social interaction. Full collaborative interaction is based upon their level of implementation and use by government. The two studies that follow are used to help identify these levels of implementation.

*First Study: Layne and Lee’s Four Stages of E-government Adoption*

Looking at the implementation of e-government may help to predict how governments adopt social media. Layne and Lee (2001) identify four developmental stages of e-government: catalogue, transaction, vertical integration, and horizontal integration (Figure 6). In the first or catalogue stage governments create a website due to pressures from the public, technologically savvy employees, or other stakeholder pressures. For example, the public has become so used to interacting with private businesses through the Internet that they begin to expect the same from government. Since there is little Internet expertise, governments limit their implementation to a non-transactional or one-way information site (Layne & Lee, 2001).

The next stage is transaction. In this stage, citizen interaction with government in the online environment moves beyond simple fact-finding to being served by e-government. Citizens can now complete vehicle registration or file their taxes online which empowers them to interact with their government any time online. The third stage is vertical integration. At this stage, transacting with the government online is now a norm of the culture and vertical levels of

government are beginning to integrate with each other. The final stage they propose is horizontal integration. In this stage, government services are now integrated across functional walls. A good example would be a one-stop web page that allows citizens to apply for multiple services from one web-site, such as allowing someone to register to vote and renew their state driver's license from the same website.

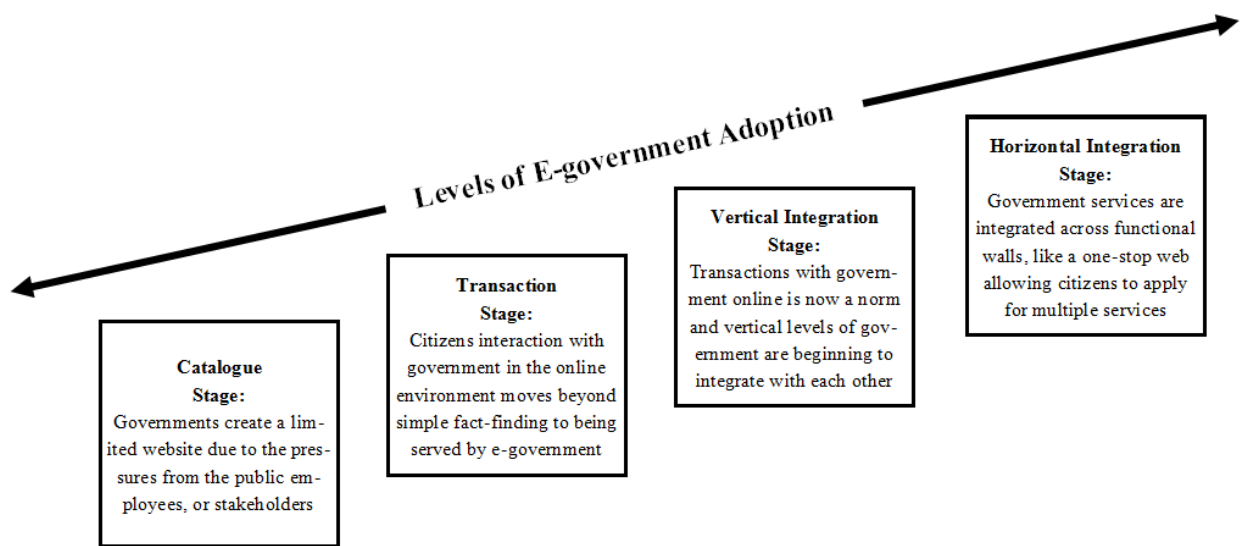


Figure 6: Layne and Lee's Four Stages of E-government Adoption

*Second Study: Lee and Kwak's Open Government Maturity Model*

Lee and Kwak (2012) created an Open Government Maturity Model (OGMM) that they claim governments can use to measure their levels of openness through their social media use. This can be added to the study above to help create levels of government social media adoption. They share five levels of a government's online presence: initial conditions, data transparency, open participation, open collaboration, and ubiquitous engagement (Figure 7). At the first level there is little to no open government or social media use (Lee & Kwak, 2012). Any online

presence focuses on cataloguing and one-way information sharing with the public, but it does not allow citizens to engage the organization in any meaningful way (Layne & Lee, 2001). The second level is data transparency. This level is “the first step towards open government... [but] the use of social media to foster open government is still relatively limited” (Lee & Kwak, 2012:496). Interacting with citizens through traditional web-sites and e-mails is still the preferred method for receiving citizen feedback. At this stage the concern is more towards the process of getting information online, as misinformation can damage the organization’s reputation and the public’s trust (Lee & Kwak, 2012).

The third level is open participation and allows for input from citizens. This is where the organizations begin to interact with citizens through more informal and spontaneous anecdotes, stories and conversations, rather than traditional feedback methods (e.g., surveys). The fourth level is open collaboration (Lee & Kwak, 2012). This is similar to Layne & Lee’s (2001) horizontal integration stage. Here there is interagency collaboration, open collaboration with the public, and co-creating value-added services. The final level is ubiquitous engagement and is built upon levels 2, 3, and 4. Ubiquitous engagement seeks to take the organization’s “transparency, participation, and collaboration to the next level of public engagement by...fully harnessing the power of social media and related technologies” (Lee & Kwak, 2012:499). This is a true one-stop social media interaction, where government services are integrated and citizens can engage in various government activities without having to leave this single social media tool (Lee & Kwak, 2012).

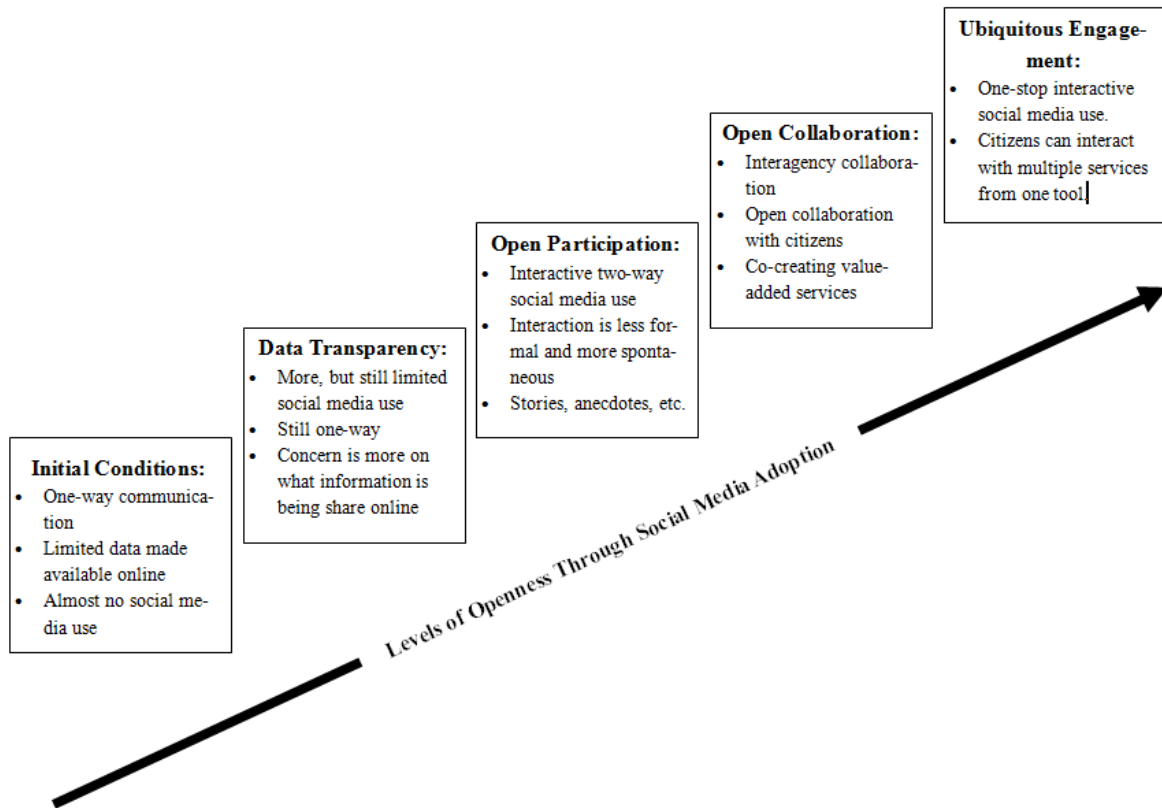


Figure 7: Lee & Kwak’s Five Levels of Government Openness through Social Media

#### Four Levels of Social Media Adoption

Taking these two studies and joining them with research conducted by Bryer and Nelson (2013), Lee et al. (2011) and Ma (2012), social media adoption by public administrators can be placed on a continuum of four categories: no social media use, emerging social media use, advanced social media use, and collaborative social media use (Figure 8). Each public administrator’s decision to implement a social media tool can be placed into one of the four categories on this continuum.

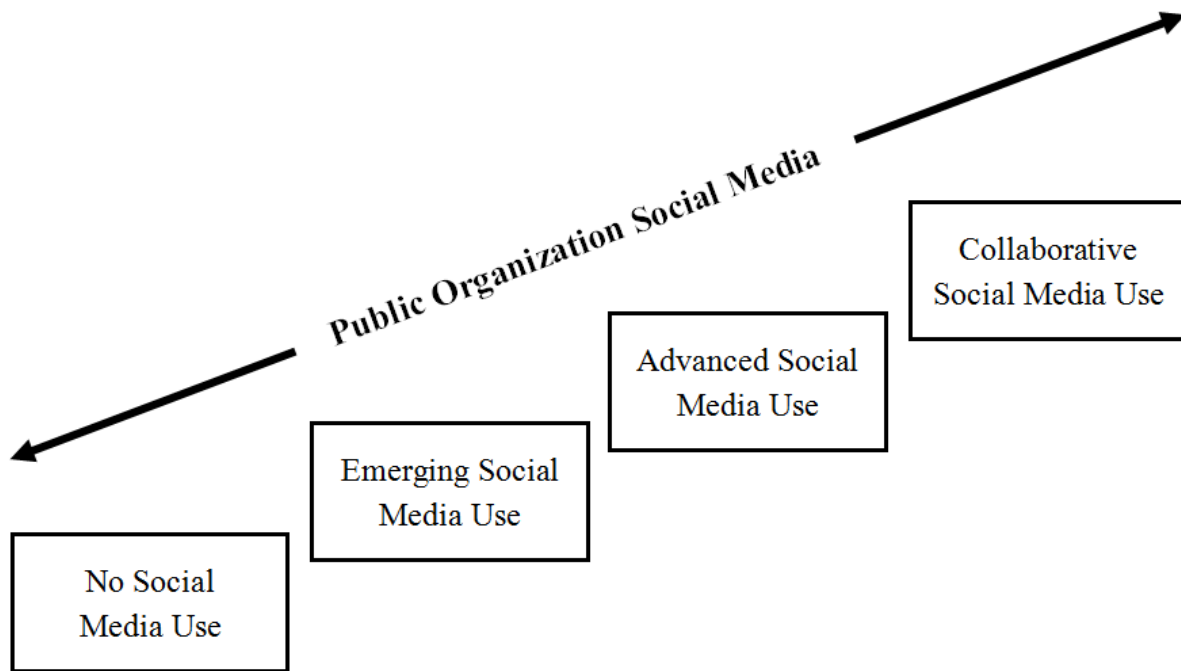


Figure 8: Levels of Social Media Adoption

No response is exactly what it implies – a public administrator will not employ any social media platforms to engage citizens in the public decision making process. In this category the administrator perceives no influence to adopt a social media platform. The other three categories require more definition. An emerging social media adoption occurs when a platform is implemented, but it is then manipulated in a way that only allows it to function in much the same way as the earlier Web 1.0 platforms (Bryer and Zavattaro, 2011). This would be similar to the e-government catalogue stage (Layne & Lee, 2001) and the data transparency stage on the open government maturity model (Lee & Kwak, 2012). For example, a city can use a Twitter account to push real time notifications to interested citizens but not allow for any collaborative responses to these notifications.

An advanced social media adoption occurs when the social media platform is implemented to its full interactive potential, but it is not achieving full collaborative interaction (Brainard & Derrick-Mills, 2011; Bryer & Nelson, 2013; Bryer & Zavattaro, 2011). This is built on the e-government transaction stage (Layne & Lee, 2001) and the open participation stage in the open government maturity model (Lee & Kwak, 2012). Interactions are less informal and government is determining what interactions should occur through social media. For example, a citizen posts to a Facebook page that is set up to allow replies but the administrator never goes back to respond to any replies made to the original post (Scott, 2013). If the administrator does go back and respond to replies, the back and forth post are just the administrator and the citizen talking over or past each other. Any collaboration at this stage does not impact policy decisions.

The final stage in this model is collaborative social media use. This stage is built upon the vertical interaction stage in e-government (Layne & Lee, 2001) and the open collaboration stage in the open government maturity model (Lee & Kwak, 2012). A collaborative social media response is one in which administrators are placing “a high priority on using social media to encourage public participation” (Scott, 2013: 43). At this level of adoption, citizens are encouraged by public administrators to give them feedback on policies, issues, services, plans of government, service design, and new ideas. A tool such as Facebook is implemented at its fullest collaborative potential, allowing both the administrator and the citizens to post comments. There would be no attempt to limit, through manipulation, users’ abilities to post responses, and there would be a substantive collaborative back and forth discussion occurring between both parties. Unlike the advanced social media use, administrators and citizens would not be talking past each other. At this stage they are now actually engaging and responding.



### Environmental Influences and Their Proposed Social Media Adoption

This study examines responsiveness at the administrator-citizen level, and more specifically the adoption of social media as a tool to engage citizens. It is predicted that an administrator will fall into one of five environments when choosing to adopt social media based on the four perceived influences presented earlier in this Chapter. These five environments are: controlled environment, constrained environment, coerced environment, consulting environment, and citizen collaborative environment. It is also predicted that each environment will most likely result in the adoption of social media in one of the four levels presented above. Laid out, these environments and social media responses can be seen as progressing from an administrator who is more organizationally focused to one who is focused on citizen collaboration (Figure 9). The perceived environments and resulting level of adoption are presented in the sections that follow.

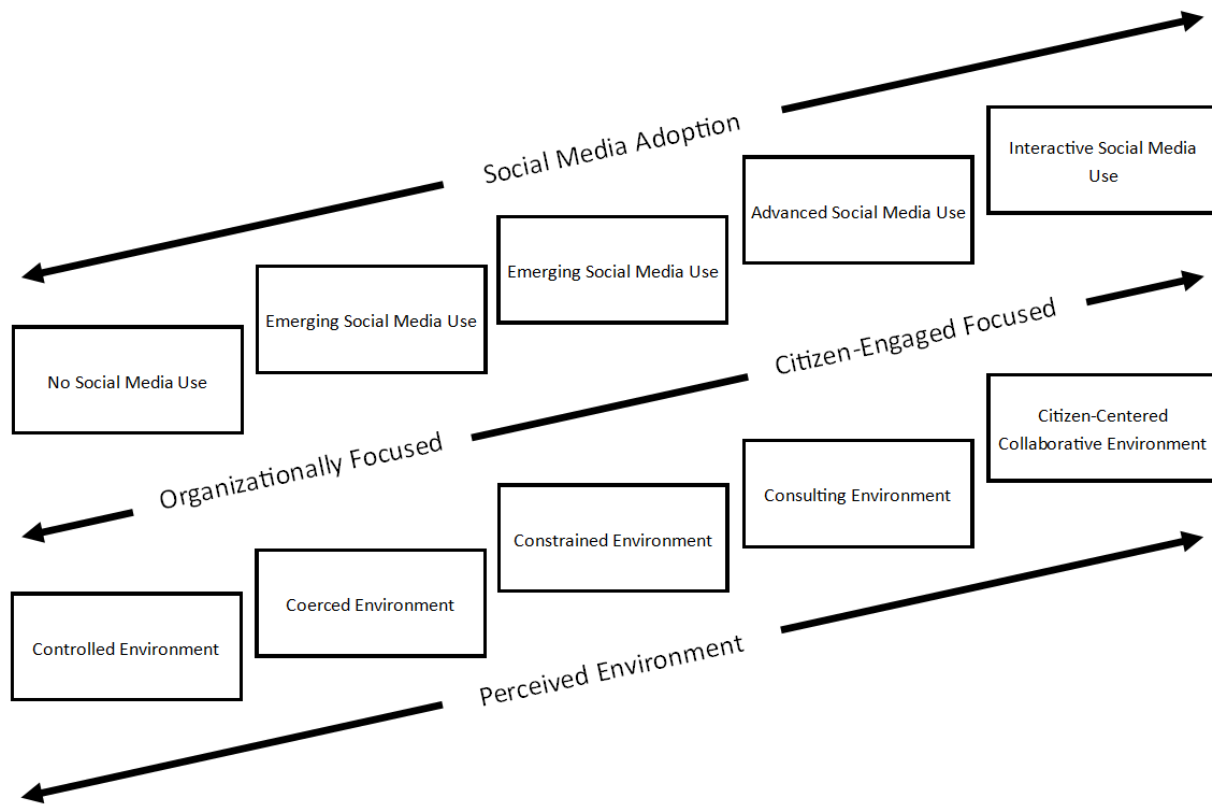


Figure 9: Environment to Social Media Adoption

*Closed Environment*

The first predicted environment is closed. In this environment, a manager perceives no autonomy to make decision without permission from elected officials or based on the organization’s culture. The administrator perceives that there is strong political control over the organization and departments by elected officials due to very little trust that administrators will make the right decisions will if they are left on their own. The organizational structure is perceived as highly centralized and not in support of social media adoption. In this environment, it is possible that elected officials want to control the information that is being shared with citizens and prefer traditional forms of interaction with citizens, such as public meetings,

conventional websites or e-mail. Therefore, there is no support for innovation or social media use.

Administrator responsiveness to include citizens or adopt social media is controlled by their perception of accountability to the organization or elected officials. Responsiveness is not towards engaging citizens in participation. In this situation, the administrator believes that it is elected officials' responsibility to engage citizens, and that their responsiveness to citizens comes from responsibly managing the department for the elected officials. Therefore, being responsive is not including citizens in decision making, but rather adopting professional and business-like standards to effectively and efficiently manage the department (Stivers, 1994). If the administrator felt he or she had any decision making power, they still would not adopt social media because they have no understanding of how to use it, no isomorphic pressure to use it, or do not see it benefiting his or her department.

*H<sub>5</sub> – A public administrator responding in a closed environment will most likely choose not to adopt social media.*

### *Coerced Environment*

The next perceived environment is coerced. In this environment, administrators still perceive strong control over their autonomy from politicians or the organization's culture. However, managers now sense some degree of freedom to exercise their own decisions for what is best for their department through decoupling (Crilly, Zollo & Hansen, 2012; Fiss & Zajac, 2006). Unlike the controlled environment, the administrator now has the perception that he or she is being coerced into adopting social media by elected officials or through a highly

centralized organizational structure. The administrator still does not perceive using social media tools as being in the best interest for their department due to limited resources, their own preconceptions towards technology, or trust in citizen participation. However, they do want to remain legitimate with their peers, and they do not want to lose any perceived managing power they may have within the organization or with elected officials. Not wanting to lose these resources or power, a manager may choose to decouple (Lines, 2005) the technology policy they adopt for their individual department from the political or organizational influences. In doing so, they balance political or organizational influences with what the administrator sees as the best direction for his or her department, which is seen as not ready to fully move in that direction (Bryer, 2011; Fiss & Zajac, 2006; Kearney & Sinha, 1988). Due to this decoupling, it is predicted that the manager will still want to control the information and only implement social media tools to allow for one-way information sharing.

*H<sub>6</sub> – A public administrator responding under the coerced environment is most likely to implement an emerging social media use.*

### *Constrained Environment*

The constrained environment is completely flipped from the coerced environment. Here, the manager has a good understanding of social media, is influenced by his or her peers to adopt it, or perceives adopting social media as good for their department. However, the administrator feels constrained by perceived political and organizational influences. The manager believes they have a little more trust from politicians or higher levels of management, but there are still some elected officials or organizational leaders who are skeptical of adopting an advanced or

interactive social media use. This could be due to a lack of sufficient resources to manage a social media platform or fear over losing their decision making power (Arntsein, 1968). For example, there may not be enough money in the budget to hire a full-time employee to monitor and respond to social media interaction, or legal requirements (e.g., open records laws) can make implementation of online social interaction expensive and time consuming to monitor.

Administrators may also sense that the intraorganizational resources and bureaucratic structures are not ready to fully adopt social media (Jun & Weare, 2011). Believing there is a centralized decision not to adopt social media for the organization, the administrator again decouples agency policy from his or her own department implementation of a limited version of social media for their department that follows centralized guidelines. The administrator sees this compromise as a way to introduce social media as a tool for collaboration to an organization not ready to adopt them, but may in turn lead to eventual full implementation of social media activities with their success (Lee & Kwak, 2012).

*H7 – A public administrator responding under the constrained environment is most likely to implement an emerging social media use.*

### *Consulting Environment*

The fourth environment is consulting. A consulting environment is perceived as more decentralized and has strong support from those in charge of the organization. The manager now believes they have more discretionary power to make the decisions that are in the best interest of managing their organization. Additionally, being more decentralized and having more trust among elected officials, managers feel more comfortable with innovating a social media

platform that engages citizens. The administrator also has a stronger knowledge of how to use social media and sees that the benefits of implementing it outweigh most of the costs of staying with the status quo. However, social media, though implemented for collaboration, remains at a consulting level. In a consulting level, citizens are given the opportunity to speak on policy, but it is more procedural than interactive (Arnstein, 1968). There is still little trust in the citizen's knowledge to be able to participate in any meaningful way. Social media is used to allow citizens to communicate and share stories, but their feedback does not lead to shaping policy. The administrator is allowing the citizen to participate, but still sees themselves as the technical expert of the organization. Administrators may also be responding to citizens only when they are customers, and thereby run the risk of neglecting the citizen population input at large.

*H<sub>8</sub> – A public administrator responding under the consulting environment is most likely to implement an advanced social media use.*

#### *Citizen-Centered Collaborative Environment*

The final proposed environment is citizen-centered collaborative. Under this response, the administrator is responding to external management pressures from citizens or the media to be included in the decision making process. The administrator, again, perceives this to be a highly decentralized organizational structure with a high level of trust given to them to manage their department. As such, there are little to no constraints placed upon the administrator by political or organizational rules, and the desire to use social media as a tool to engage citizens is mutually shared by the administrator and the public. In this response, the administrator sees himself or herself most accountable to citizens (Handley & Howell-Moroney, 2010), sees the

value in the role citizens play in collective deliberation and decision making (Cooper et. al., 2006), does not mind sharing power with citizens in public decisions (Arnstein, 1968; Bryer, 2009), and sees the benefits of implementing a social media tool for citizen engagement exceeding the costs (Moynihan and Lavertu, 2012). Perception of what role citizens should play in government decision making evolves beyond seeing them just as customers, and they are now seen as collaborative partners (Vigoda, 2002). As a result, citizen-centered collaboration between the administrator and the citizens is achieved (Bryer, 2006; Cooper et. al., 2006). Based on these findings, it is predicted that an administrator operating in this environment will choose to adopt a collaborative social media use.

*H<sub>9</sub> – A public administrator responding under the collaborative environment is most likely to implement a collaborative social media use.*

### Chapter Summary

This chapter examined the existing literature to identify influences on various levels of social media adoption. Based on the existing literature, four overarching influences on social media adoption are proposed: perceived public influences, perceived organizational culture, perceived administrative preconceptions, and perceived public influences. The existing literature also helped to identify four levels of social media adoption: no social media adoption, emerging social media adoption, advanced social media adoption, and collaborative social media adoption. Five administrative environments are proposed based on the four influential categories: closed, coerced, constrained, consulting, and collaborative. Each of these environments has been linked

to a one of the four proposed levels of social media adoption. The next chapter examines the methods that are used to test these proposals.



## CHAPTER THREE: METHODOLOGY

### Introduction

The goal of this study is to identify environmental influences on city department managers and then determine if these influences result in various levels of social media adoption (see Figures 5, 8 and 9). It is therefore necessary to create a survey instrument that captures the independent variables: *perceived political trust*, *perceived organizational*, *perceived administrator preconceptions*, and *perceived public/media influences*, as well as capturing the dependent variable: *level of social media use within the department*. This chapter identifies the questions that are used to capture these variables and explains the methods for testing the proposed models. It is divided into three main sections: data collection, measurement, and survey administration.

### Data Collection

Invitations to participate in an online survey were sent to 783 department managers who oversee three functional service areas of city government. Managers selected to participate have been identified as Directors of Public Works, Parks and Recreation, and Planning (or an equivalent department in the selected city) from 261 cities throughout the United States. The selected cities have a population of 100,000 or more according to 2010 U.S. Census data. The benefit of this design is that it captures data from department directors who oversee an area of city government that provide direct services to the public. Based on their director position in the city management structure, these managers are viewed as being in an environment that requires

the greatest balance between political/organizational responsiveness and public responsiveness. Larger cities are selected because they tend to have more formalized department structures and more likely to have one director supervising one department. In some of the smaller cities, however, one manager may oversee multiple departments. For example, it is possible that one manager could be the director for both the planning and zoning and public works departments.

The initial response rate was 21.3% or 167 respondents. However, ten survey responses could not be used because of missing data. This brings the final response rate to 20.1 % or 157 respondents. There is an equal representation of respondents among the three functional areas: 52 respondents for public works, 52 respondents for parks and recreation, and 53 respondents for planning and zoning. Due to the anonymity of the survey respondents, it cannot be determined which cities are represented. An examination of the confidence level and interval shows that this survey achieves a 95% confidence level with a confidence interval of 7. Based on the low response rate and the confidence interval, it is difficult to apply the findings of this survey to the general population. This does become a limitation in this survey and is addressed in the final two chapters of this study.

One possible explanation for the low response rate may be due to the timing of the survey administration. This survey was administered from mid-July to early September 2014. A number of automated e-mail replies stated that the respondents were on leave. Even with the two follow-up e-mails, administrators may have been inundated with e-mails upon their return and decided they did not have enough time to respond to a survey. Additionally, budget sessions may have had an impact on survey response rate. There were a couple of responses from administrators stating they would try to complete the survey if they had time, but they were in the middle of

budget sessions. Some administrators may have opted not to take the survey due to competing budget activities.

Another possible explanation may be participant concerns about anonymity. This was a concern when questions were selected for the survey instrument. Managers were assured in the e-mails and letters that their answers would be completely anonymous. However, there may have still been some concerns among the managers that their responses could somehow be linked back to them. Sax, Gilmartin and Bryant note that those asked to participate in online surveys are responding in lower rates because these invitees “may harbor suspicions about online survey administration and may have concerns about confidentiality that discourage participation” (2003: 410). Qualtrics is the survey administration program used to collect the responses, and it allows the researcher to see how many of the e-mailed survey invitations have been opened, and survey started and completed. For example, of the 218 invitations that were sent via e-mail to planning and zoning managers, 92 were opened but only 50 were completed. This shows that 42 managers opted not to complete the survey after opening it. It is possible that some of these managers chose not to respond after seeing the questions because of anonymity concerns. It is also possible, as stated above, that managers opted not to complete the survey because of time concerns.

### *Measurement*

The measurement section identifies and explains the questions that are used to capture the data for this study. All questions are taken from previously administered studies and Appendix C explains how the questions have been adapted for this survey.

### *Dependent Variable*

The dependent variable in this study is levels of social media use (SMU). This is a continuous variable that moves from no social media use to collaborative social media use and is measured by five questions in the survey. The first three questions come from a study conducted by Bryer and Nelson (2013) and capture whether or not the department is using a social media platform. It also captures whether or not social media is being used for one-direction information sharing.

- (SMU1) Does your department use social media? Yes/No
- (SMU2) What kind of social media does your department use?
- (SMU3) Are the social media tools only used to share information unidirectionally (one-way) with citizens? Yes/No

The final two questions come from a study conducted by Oliveira & Welch (2013) and determine whether the level of social media use is consulting or citizen-centered collaborative.

- (SMU4) If two-way collaboration is allowed with your social media tool(s), do you allow citizens to provide input on planning and policy decisions? Yes/No
- (SMU5) If two-way collaboration is allowed with your social media tool(s), is it used to enable collaboration on projects with citizens? Yes/No

Respondents are scored with a 0, 1, 2 or 3 based upon the responses to each question.

Respondents who answered “no” to SMU1 are scored with a 0 – No Social Media Use.

Respondents, who answered “yes” to SMU1, are then asked to identify which social media tool they were using through question SMU2. This question is used ensure respondents are not identifying a city or department webpage as a social media tool. Respondents who are identified

as using a social media tool and answered “yes” to SMU3 are given a score of 1 – Emerging Social Media Use. Respondents who answered “no” to SMU3 were then asked to answer SMU4 and SMU5. Those respondents who answered “no” to either of these questions are given a score of 2 – Advanced Social Media Use. Respondents who answered “yes” to either or both of these questions are given a score of 3 – Collaborative Social Media Use.

### *Independent Variables*

There are four primary independent constructs in this study: perceived political influence, perceived organizational culture, perceived administrator preconceptions, and perceived public influence. These larger constructs are formed by smaller constructs and questions that are taken from previous surveys as noted in the sections that follow. Unless otherwise noted, all variables are scored on a five point Likert-type scale. This did require a modification of some previous survey responses from four and seven point scales to five point scales for uniformity (noted in Appendix C). The five point scale was chosen over the four point scale because it offers a neutral point option for respondents who may neither agree nor disagree to a question. As noted by Leung (2011), there is no difference in the results when offering or not offering a neutral point. Therefore, this should have no impact on the data. Furthermore, Dawes (2008) notes that five and seven point scales are compatible, so again there should be no impact on the data.

### Perceived Political Trust

Perceived political trust (PPT) is the first larger construct and is used to capture the administrator’s perceived influences from elected officials (e.g., mayor, city council) (Yang & Pandey, 2011). In measuring political trust in the past, Yang and Pandey (2009; 2011) have

broken it into two smaller constructs *elected official trust for the department* (EOT) and *budget flexibility* (BF). Five questions are used from their previous surveys to measure EOT and BF. The data captured by these questions previously showed that higher levels of trust in the department and greater budget flexibility led to higher manager autonomy and greater citizen responsiveness. It is believed that using these same questions in this study will capture PPT from department managers. That data can then be used to determine PPT's impact on SMU. The following five EOT and BF questions are used to capture PPT:

*Elected Official Trust for the Department:*

- (EOT1) Most elected officials in our city trust my department.
- (EOT2) Most elected officials believe that my department is competent.
- (EOT3) Most elected officials believe that my department is effective.

*Budget Flexibility:*

- (BF1) My department is able to shift financial resources within its budget to accomplish its mission.
- (BF2) My department is able to shift nonfinancial resources within budget to accomplish its mission.

Perceived Organizational Culture

While it is most likely that PPT will have some level of impact on the organization's culture, the two are measured separately in this study. As noted above, political influences are those the administrator perceives coming directly from elected officials in terms of trust and

support for their department. Perceived organizational culture (POC) is how the administrator perceives the city organizational culture and his or her flexibility to make decisions and manage within the city's organizational structure. POC captures perceptions of autonomy from higher management (e.g., city managers, chief executive officers, oversight boards, etc.), bureaucratic red tape, organizational innovation and organizational resources. Three smaller constructs are used to capture POC: *organizational innovation* (OI), *autonomy and decentralization* (AD), and *organizational resources* (OR). These three constructs and their questions come from three previous studies in responsiveness and technology adoption. They have been merged in this study to capture POC.

In their previous studies, these questions captured a manager's ability to make decisions for his or her department, their ability to be innovative, and whether or not they believed they had the resources they need to implement a new technology. Two questions from Oliveira and Welch (2013) are used to capture OI, five questions from Yang and Pandey (2009; 2011) are used to capture AD, and three questions from Pendersen (2005) are used to capture organizational resources. Two of the AD questions are measured on a scale from 0 to 10 (levels of perceived bureaucracy and red tape). All of the other questions in this section use a five-point Likert type scale for scoring. The following ten questions are used to measure POC:

*Organizational Innovativeness: (Oliveira & Welch, 2013)*

- (OI1) Most employees in this organization are not afraid to take risks.
- (OI2) Employees in this organization are rewarded for developing innovative solutions to problems.

*Autonomy & Decentralization: (Yang and Pandey, 2009)*

- (AD1) There is little action taken here until a supervisor approves a decision.
- (AD2) In general, a person who wants to make his or her own decisions would be quickly discouraged.
- (AD3) Even small matters have to be referred to someone higher up for answers.

*Autonomy & Decentralization: (Yang and Pandey, 2011)*

- (AD4) Please assess the extent of hierarchal authority in your city's government (Please enter a number between 0 and 10, with 0 signifying few layers of authority and 10 signifying many layers of authority).
- (AD5) If red tape is defined as burdensome administrative rules and procedures that have negative effects on your department's performance, please assess the level of red tape placed on your department (Please enter a number between 0 and 10, with 0 signifying no levels of red tape and 10 signifying highest levels of red tape).

*Organizational Resources: (Pendersen, 2005)*

- (OR1) I have the necessary support and assistance to use social media.
- (OR2) I have the financial and technological resources required to use social media.
- (OR3) I have access to the software, hardware and network services required to use social media.



### Perceived Administrator Preconception

The third larger construct is perceived administrator preconception (PAP) and is used to capture two administrator preconceptions: the administrator's perceptions of the citizen engagement process and their perceptions of social media tools. For citizen engagement, this includes the administrator's perception of trust in the participation process and their willingness to promote citizen engagement activities. For social media, it includes their personal and professional innovativeness and perceptions of the tool's usefulness. Five smaller constructs and their questions are used to capture PAP: *personal innovativeness* (PI), *attitude towards use* (AU), *perceptions of tool usefulness* (PT), *trust in the participation process* (TPP), and *administrator's willingness to promote citizen participation activities* (WTP). As with POC, these constructs and their questions come from previous studies in the areas of responsiveness and technology adoption and are combined to capture PAP. Three questions, taken from Lu et al. (2005), are used to measure PI. Four questions came from Penderson (2005) and are used to measure both AU and PT. The final questions came from Yang (2006) and measure TPP and WTP. All questions in this section use a five point Likert-scale for responses, except question AU1, which used a seven point semantic differential scale (from 1 – extremely beneficial to 7 – extremely harmful). The following ten questions are used to measure PAP:

#### *Personal Innovativeness: (Lu et al., 2005)*

- (PI1) Among my peers, I am usually the first to explore new technology.
- (PI2) I like to experiment with new technology.
- (PI3) In general, I am hesitant to try out new technology.

*Attitude Towards Use: (Penderson, 2005)*

- (AU1) For this question, managers are asked to select from a range of values on a semantic differential scale as it relates to their attitude toward the use of social media to engage citizens from 1 – Extremely Beneficial to 7 – Extremely Harmful.

*Perception of Tool Usefulness: (Penderson, 2005)*

- (PT1) I find it easy to use social media.
- (PT2) In my profession, it is advisable to use social media.
- (PT3) Most of my colleagues think using social media is a good idea.

*Trust in the Participation Process: (Yang, 2006)*

- (TPP1) Citizen involvement should be controlled so as not to impair our work efficiency.

*Administrator's Willingness to Promote Citizen Participation Activities: (Yang, 2006)*

- (WTP1) It is the elected officials' business, not the administrators' business, to initiate citizen participation programs.
- (WTP2) Citizen participation should be adopted in all governmental areas and functions.

Perceived Public Influence

Perceived public influences (PPI) is the final larger construct, and it is used to indicate the level of perceived influence citizens and the media have on the administrator. This would include direct influence from the public and the administrator's perceptions of the citizens' ability to contribute in a meaningful way. PPI is captured by three smaller constructs: *perceived*

*participant competence (PC), prior experience with citizens (PEC), and degree of public/media influence (DPI).* Questions for these values have been pulled from previous studies conducted by Yang (2005) and Yang and Pandey (2007; 2011). In their previous studies, these questions captured a manager's willingness to engage citizens based upon their previous experiences with them, their perceptions of whether or not citizens have the knowledge needed to provide valuable input, and their overall perceived influences of citizens and the media. The PC and PEC questions are modified from a seven-point (noted in Appendix A) to a five-point Likert scale, and the DPI questions are scored on a three point scale (1 – no influence, 2 – some influence, 3 – high influence). The following nine questions are used to capture PPI.

*Participant Competence: (Yang & Pandey, 2011)*

- (PC1) Most citizens who participate have the people skills needed to make a valuable contribution.
- (PC2) Most citizens who participate have the expertise or technical knowledge needed to make a valuable contribution.
- (PC3) Most citizens who participate have the civic knowledge (how government works) needed to make a valuable contribution.

*Prior Experience with Citizens: (Yang, 2005)*

- (PEC1) In those efforts or programs in which you participated, citizens generally were very cooperative.

- (PEC2) In those efforts or programs in which you participated, citizens were committed throughout the duration of the efforts or programs.
- (PEC3) In those efforts or programs in which you participated, your organizational goals were successfully achieved.

*Degree of Public/Media Influence: (Yang & Pandey, 2007)*

- (DPI1) How much influence does public opinion exert over your department?
- (DPI2) How much influence does media opinion exert over your department?
- (DPI3) How much influence do client groups exert over your department?

*Control Variables*

Age, tenure, form of government, and direct report questions are used as control variables. Age and job tenure are continuous variables. Job tenure is captured by two questions: *How long have you worked for the city?* and *How long have you been in your current position?* As Sargo (2010) notes, social media use is up among all age groups, but is highly used among the millennial generation. A younger manager may be more familiar and comfortable with using social media, and therefore, age may have an impact on administrator bias. Years in position and years with the city may also have an impact on decision making in two ways. Elections often see local politicians come and go every two to four years. As a result, civil servants who are not elected can gain some level of power based on the knowledge and experience they gain through their years of service. New politicians may look to them for policy input based on this knowledge, or politicians who continue to get elected may develop positive relationships with

managers who have worked with the city for a long time. Descriptive statistics for age and tenure are listed in Appendix C.

This study also included form of government as a control variable. Bryer and Nelson (2013) conducted an exploratory study on social media use and form of government. Their study shows seven different forms of government. The mayor-council-manager form of government is one in which the mayor is directly elected. The council (mayor) manager form of government is where the mayor is selected from within the council by the members of the council. The empowered mayor-council-manager form of government is one in which the mayor is elected and appoints the manager with council approval. The mayor-council administrator form of government is one in which the mayor is elected, but the administrator is appointed by the council. The mayor-council-administrator form of government is one in which the mayor and the council are both directly elected, with a chief administrative officer who is appointed by the mayor with the council's consent. The mayor-administrator-council form of government is one in which both the council and mayor are directly elected, but a chief administrative officer is appointed by the mayor without council consent. Finally, the mayor-council form of government has both a directly elected mayor and council, but no chief administrative officer. Form of government questions are pulled from Bryer and Nelson (2013):

Form of government questions:

1. Our city has a council? Yes/No
2. Is your council elected? Yes/No
3. Our city has a mayor. Yes/No

4. If yes, is your mayor elected? Yes/No
5. If no, is your mayor selected by your council? Yes/No
6. Does your city have a city manager or chief administrative officer? Yes – City Manager/Yes – Chief Administrative Officer/No
7. If yes, how are they hired? Appointed by mayor and approved by council/Appointed by mayor with council consent/Appointed by mayor with no council consent/Appointed by the council only/Other

The following scoring is used for Form of Government 1 (FG1) – Mayor: 0 = No Mayor, 1 = Appointed Mayor, 2 = Elected Mayor. Similar scoring was used for Form of Government 2 (FG2) – Council: 1 = Appointed Council, 2 = Elected Council, 3 = Other. Form of Government 3 (FG3) – City Manager/Chief Administrator was scored based on the following scale: 0 = No City Manager/Chief Administrator, 1 = Yes City Manager/Chief Administrator (No response how they are hired), 2 = Appointed by the mayor with approval by the council. 3 = Appointed by the mayor with consent of the council, 4 = Appointed by the mayor with no consent, 5 = Appointed by the council only, 6 = Other, and 7 = Not sure. Table 1 shows a breakdown of respondent forms of government. Descriptive statistics for form of government are listed in Appendix C. These scores will be used with the age and tenure scores above to see if they are having an impact on levels of social media adoption.

### Survey Administration

An online survey was created using UCF’s Qualtrics Survey program. Once the survey was created, it was pre-tested in two ways. First, five non-interested parties from UCF were

asked to take the survey<sup>1</sup>. These five people were asked to take the survey based on their previous experience in creating surveys in Qualtrics. Their feedback was used to ensure the survey and questions were set-up correctly. After the first pretest, the survey was then administered to department directors from three local city governments. These cities were selected because they did not have populations greater than 100,000 on the 2010 Census and would not take away from the population.

Based on the feedback from both pre-tests, there were three adjustments made when administering the final survey. First, the survey questions were grouped together and re-sequenced so that follow-up questions opened in the same window as the primary or parent question. Second, one POC question was dropped from the pre-test to the final survey based on respondent feedback. Stazyk and Goerdel (2011) use the following question to capture organizational innovation in a previous survey: *My agency is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.* This is a double question and some respondents found it confusing to answer. Since there are two other questions in the survey to measure organizational innovation, this question was dropped to avoid any confusion. Finally, one of the respondents forwarded the survey link to their city's communications department. The respondent's department did not use social media, but the city had a Facebook page operated by their communications department. This was identified as a potential threat to the survey, since the purpose of the survey was to capture social media within

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<sup>1</sup> Five people from UCF's Center for Distributed Learning were asked to review the survey. They have conducted multiple previous surveys using Qualtrics. They are viewed as having expertise in Qualtrics and able to provide feedback on survey development and delivery. They are labelled non-interested because they have no connection to this dissertation other than being asked for their guidance with Qualtrics.

the three departments. Based on this threat, respondent instructions were updated asking them not to forward the survey invitation to any other department.

The final survey was administered from mid-July to September 2014, and several contact methods were used to help increase response rate. Pre-survey e-mails and phone calls were made to respondents to identify the best method for distributing the survey link to them. Based on pre-survey responses, participants were either mailed or e-mailed the survey link. Qualtrics allows for follow-up e-mails to be sent to those who have not yet taken the survey and thank you e-mails to be sent to those who completed the survey. Two follow-up e-mails were sent to those who did not complete the survey, and one thank you e-mail was sent to all those who took the survey. One follow-up letter was sent to all those who received the original survey link by mail.

### Chapter Summary

This chapter explained the methods and identified the questions that were used to survey respondents. Of the 783 invitations sent to city department managers to participate in a Qualtrics survey only 167 chose to participate in the survey. Of those who participated, 157 survey responses were able to be used for final data analysis. This was a lower than expected response rate and does become a limitation in this study. There are 37 questions that capture the independent variables: perceived political trust, perceived organizational culture, perceived administrator preconceptions, and perceive public influence. Five contingency questions are used to capture the dependent variable, and age, job tenure, form of government, and direct report questions are used as controls in this study. Analysis of the data and discussion of the findings is presented in the next chapter.



## CHAPTER FOUR: FINDINGS

### Introduction

There are three main proposals put forth in the literature review. First, social media tools are adopted by managers in four levels: no social media use, emerging social media use, advanced social media use, and collaborative social media use. Second, there are four categories of influences that determine the level of social media adoption by a department manager: perceived political trust, perceived organizational culture, perceived administrator preconceptions, and perceived public influence. Third, these influences, when added together, create five departmental environments that are likely to lead to one of the four levels of social media adoption: controlled environment, constrained environment, coerced environment, consulting environment, and citizen collaborative environment.

Since the proposals in Chapter Two are presented in three steps, data analysis in this chapter is also presented in three steps. The first step shows levels of social media use among the respondents. This data is captured using statistical analysis. The second step shows the relationships between the four perceived influential categories and levels of social media use. This data was analyzed using one-way in-between groups ANOVA analyses and post hoc tests. The reliability of the independent variable questions have all been checked by Cronbach's Alpha. The results of each test are included with the second step findings. The final step uses the results from the second 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. A summary of findings has been included with the presentation of each of these steps.

### Step 1: Analysis of Levels of Social Media Adoption

Each respondent's social media use has been placed into one of the four categories based upon their answers to the dependent variable questions: no social media use, emerging social media use, advanced social media use, and collaborative social media use. Levels of social media use is examined by individual departments and combined departments. A descriptive analysis of the combined departments shows that overall 82% of the respondents are using some form of social media in their department. When broken into levels of use, 21% are using social media at the emerging level, 11% are using social media at the advanced level, and 49% are using social media at the collaborative level (Table 1). When separated into departments, parks and recreation has the highest overall level of social media use at 92.7%, planning and zoning has the least amount of overall social media use at 69.8%, and public works is in the middle at 80.8% social media use. Respondents were asked to share what type of social media they are using. This question helped to verify whether or not respondents are mistaking Web 1.0 programs (e.g., city web sites) for Web 2.0 social media programs. Four surveys (noted in Chapter Three) have been excluded because respondents indicated their city's web site as their social media page. Table 2 breaks down the type of social media used by department.

Table 1: Summary of Findings – Overall Department Social Media Use

<b>Social Media Type</b>	<b>Public Works</b>	<b>Parks and Recreation</b>	<b>Planning and Zoning</b>	<b>Total Use</b>
Social Networking Site (e.g., Facebook)	75%	86.5%	69.8%	77.1%
Blogs or Microblogs (e.g., Twitter)	51.9%	78.8%	52.8%	61.1%
Collaborative Spaces (e.g., Wikispaces)	7.7%	9.6%	7.5%	8.2%
Virtual Social Worlds (e.g., Second Life)	0	>1%	0	>1%
Other	19.2%	7.7%	17%	14.6%

Table 2: Summary of Findings – Levels of Social Media Use by Department

<b>Social Media Use</b>	<b>Public Works</b>	<b>Parks and Recreation</b>	<b>Planning and Zoning</b>	<b>Overall Average</b>
No Social Media Use	19.2%	7.7%	30.2%	19.1%
Emerging Social Media Use	15.4%	23.1%	24.5%	21.0%
Advanced Social Media Use	15.4%	13.5%	3.8%	10.8%
Collaborative Social Media Use	50.0%	55.8%	41.5%	49%
Combined Social Media Use	80.8%	92.7%	69.8%	

There are two interesting findings from the first analysis (Table 1). The first interesting finding are the high levels of social media use among the respondents. This includes the overall high levels of total social media use among the combined departments and the high collaborative

uses within the public works and parks and recreation departments. Even though it is not as high as the other two departments, planning and zoning still shows a relatively high level of social media use. The second interesting finding are the differences in the levels of social media use between the parks and recreation and the planning and zoning departments. Total social media use in the parks and recreation departments is 92.8%, and total social media use in planning and zoning is 69.8%. This is a 23% difference in social media use between these departments.

#### *Overall High Levels of Social Media Use*

There are three possible explanations for the high levels of social media use among the respondents: social media is following a natural progression of adoption, response rate bias, or issue salience. The first possible explanation is that the integration of social media use into government is following a similar progression of adoption as the four stages of e-government adoption presented by Layne & Lee (2001). This would explain why most of the respondents are using social media and why almost half have moved beyond the initial stages into the open participation and open collaboration levels of adoption (Lee & Kwak, 2012). This may also explain why some of the influences (discussed later in this chapter) may not be having as strong of an impact as predicted. These influences may have had greater impact in the early stages of social media adoption, but they are not having as much of an impact now that social media has become a normal part of interacting with citizens. Unfortunately, the survey did not include a question about length of social media use (e.g., How long have you been using social media?). This is a question that should be included in a future study in order to further explore the connections between length of social media use and levels of adoption.

The second possible reason for the higher levels of social media use may be due to response rate bias. Sheehan (2001) explains that there are four influences on response rate: survey length, respondent pre-notification, follow-up contacts, and issue salience. If a survey has too many questions, it can dissuade invitees from taking or completing the survey (Sheehan, 2001). Survey length might have played a role in response rate bias. The survey contained 37 questions to capture the independent variables, between one and five (contingency) questions to capture the dependent variable, and 14 demographic questions. Some invitees may have opened the survey and perceived this as a large number of questions. As a result, they may have felt there was not enough time to complete it.

Sheehan (2001) shows that reaching out to survey invitees before sending the survey and sending reminders to them can increase participation. E-mails and phone calls were made to department managers prior to the survey distribution. They were asked whether they would like to receive the survey link by e-mail or postal mail, and if they would provide the best address (postal or e-mail) for sending the survey to them. There were a number of managers who took the time to respond with contact information, and many of these same managers sent reply e-mails stating they had completed the survey and wanted a copy of the completed results when published. This is a valuable lesson for future surveys. Additionally, Qualtrics allows for follow-up e-mails to be sent to participants who have not yet taken the survey, even when the links are sent anonymously. Two follow-up e-mails were sent to managers via Qualtrics. Unfortunately, there is no way to identify who responded via the postal letters, so one follow-up letter was sent to all managers who received their e-mail links by postal mail. Survey response rates did increase right after the follow-up e-mails and letters were sent.

This leads to issue salience and the third possible explanation for response rate bias. According to Sheehan (2001), issue salience means that the issue is important to the respondent. This may be the cause of the higher amounts of social media use in this study. As noted in Chapter Three, many managers were on leave or in the middle of budget planning when the initial invitation was sent. A manager returning from vacation or working on developing a budget may be more likely to respond to an e-mail request to take a survey only if the issue is important to them. Also, as discussed above, the number of questions may have discouraged less interested managers in completing the survey after initially opening it.

However, the fact that all levels of social media adoption are represented, including no social media use, does suggest that issue salience in this study does not mean the managers are in support of using social media. There may be some managers who are adamantly opposed to using social media and want to make sure their voice is heard. Administering this survey to more department managers may help to determine if the higher levels of social media use are a result of response rate bias or a true representation of what is actually occurring in the larger population. When the next survey of department managers is conducted, it should be administered at a different time of year and include focus groups or interviews. More time should also be spent on reaching out to managers before the survey is administered. This may help to reduce the number of non-responses and allow for richer and more in-depth data collection.

#### *Diverse Social Media Use Between Departments*

In addition to the high levels of overall social media use, there is a significant difference (23%) in the levels of social media adoption between the parks and recreation departments and

planning and zoning departments. Unfortunately, due to the fact that answers are anonymous, it is difficult to tell if these departments represent the same or different cities. Knowing the cities these departments represent would help to determine if this variation in social media use is a reflection of differences in department or city cultures. One possible reason for this difference could be in their functions and the citizens they serve. Parks and recreation departments oversee all recreational facilities within the city, including city parks, community centers, and aquatics centers. Some of the services they provide include: renting city facilities, such as pavilions at city parks, coordinating city youth league and after school programs, and offering senior citizen programs. These are just a few of the many functions of parks and recreation departments. Arguably, a city's parks and recreation department would interact with a larger more diverse population of the city, and thereby have a greater level of social media use. Whereas, functions of a planning and zoning department might include comprehensive planning, working with developers to approve building plans, building codes, and community redevelopment plans. They are dealing with select citizens at a more professional level and not on a recreational level. Therefore, planning and zoning managers may view other forms of interaction as more professional and cost effective than social media.

### Step 2: Analysis of Proposed Influences to Social Media Levels of Adoption

There are four main constructs in this study: perceived political trust (PPT), perceived organizational culture (POC), perceived administrator preconceptions (PAP), and perceived public influence (PPI). After scoring social media use (SMU), the second step analyzed each of the four proposed environmental influences to verify whether or not they are having an impact

on the levels of social media use. One-way in-between groups ANOVA analyses and post hoc tests are used to examine the relationships between the independent variables (and their questions) and the dependent variable. Cronbach’s Alpha is also used to measure the reliability of the construct questions. Table 3 provides a summary of findings for these four variables. The four sections that follow this table examine the data to identify the individual impacts of these influences on levels of social media use.

Table 3: Summary of Findings – Constructs to Levels of Social Media Adoption

<b>Hypothesis</b>	<b>Finding</b>	<b>Comment</b>
<p><b>H<sub>1</sub></b> – A manager with a perception of higher levels of political trust should lead to higher levels of social media adoption.</p>	<p>Rejected</p>	<p>There are no significant differences found to exist between the mean scores of EOT or BF and the mean scores of SMU when all departments are combined.</p> <p>However, when broken into their individual departments, there are significant differences found to exist between the mean scores of one BF question (question BF2) and the mean scores of social media use among the planning and zoning responses.</p> <p>Based on this finding, PPT has little, if any impact on social media adoption.</p>
<p><b>H<sub>2a</sub></b> – A department with a manager who perceives a more decentralized organizational culture should show higher levels of social media adoption.</p>	<p>Rejected</p>	<p>Although there are significant differences found between decentralization and levels of SMU.</p> <p>However, decentralization does not lead to higher levels of social media adoption. It has the opposite impact.</p>



<b>Hypothesis</b>	<b>Finding</b>	<b>Comment</b>
<p><b>H<sub>2b</sub></b> – A department with a manager who perceives a more innovative organizational culture should show higher levels of social media adoption.</p>	<p>Rejected</p>	<p>When all three departments are combined, there are significant differences found between the mean scores of OI and the mean scores of SMU.</p> <p>These significant differences only distinguish advanced social media use from the other three levels.</p> <p>Based on this finding, OI has little, if any impact on SMU.</p>
<p><b>H<sub>2c</sub></b> – A department with a manager who perceives higher organizational resources should show higher levels of social media adoption.</p>	<p>Mixed Results</p>	<p>When all three departments are combined, there are significant differences found between the mean scores of OR and the mean scores of SMU.</p> <p>These differences only distinguish no social media use from the other three levels of use.</p>
<p><b>H<sub>3a</sub></b> – A department with a manager who has a higher faith in technology should show higher levels of social media adoption.</p>	<p>Mixed Results</p>	<p>When all three departments are combined, there are significant differences found between the mean scores of faith in technology and the mean scores of SMU.</p> <p>These differences only distinguish no social media use from the other three levels of use.</p>
<p><b>H<sub>3b</sub></b> – A department with a more innovative manager should show higher levels of social media adoption.</p>	<p>Mixed Results</p>	<p>When all three departments are combined, there are significant differences found between the mean scores of PI and the mean scores of SMU.</p> <p>These differences only distinguish no social media use from the other three levels of use.</p>

Hypothesis	Finding	Comment
<p><b>H<sub>3c</sub></b> – A department with a manager who has higher willingness to engage citizens in the participation process should show higher levels of social media adoption.</p>	<p>Mixed Results</p>	<p>When all three departments are combined, there are significant differences found between the mean scores of WTP and the mean scores of SMU.</p> <p>These differences only distinguish between the three levels of social media use once adopted.</p>
<p><b>H<sub>4a</sub></b> – A department with a manager who has had good prior engagements with citizens should show higher levels of social media adoption.</p>	<p>Rejected</p>	<p>There are no significant differences found to exist between the mean scores of PC and the mean scores of SMU when all departments are combined or separated.</p>
<p><b>H<sub>4b</sub></b> – A department with a manager who perceives citizens as having the knowledge to engage in the deliberative process should show higher levels of social media adoption.</p>	<p>Rejected</p>	<p>There are no significant differences found to exist between the mean scores of PEC and the mean scores of SMU when all departments are combined or separated.</p>
<p><b>H<sub>4c</sub></b> – A department with a manager who is highly influenced by the public/media should show higher levels of social media adoption.</p>	<p>Mixed Results</p>	<p>There are no overall significant differences found to exist between the mean scores of PPI and the mean scores of SMU when all departments are combined.</p> <p>There are significant differences found to exist between the mean scores of one DPI question (question DP1) and the mean scores of SMU when all departments were combined.</p> <p>These differences only distinguish between no social media use and the higher two levels of social media use.</p> <p>When broken into their individual departments, there was a significant difference found between the mean scores of question DP2 and the mean score of SMU.</p>

### *Perceived Political Trust*

The first larger construct analyzed in this study is PPT. There are five questions that are used to capture PPT. Three questions examine elected official trust (EOT) and two questions examine budget flexibility (BF). The alpha coefficient for all five questions is .777, suggesting that these items have a relatively high internal consistency. Respondents with a score of 11 or above (agree to strongly agree) on their EOT questions are determined to have a perception of high levels of trust from their elected officials. Based on this scoring, an overwhelming number of respondents (92.5%) perceive high levels of trust from the elected officials. Respondents with a score of 7 or above (agree to strongly agree) on their BF questions are also deemed to have a perception of high trust levels from their elected officials. When scored, 77.7% of respondents report that they have the ability to move financial and non-financial resources within their departments. This shows a high level of perceived political trust among the respondents.

A one-way in-between groups ANOVA analysis was conducted on PPT to find out how much of an impact it is having on levels of social media adoption. No relationship is found between the mean scores of the larger construct PPT and the mean scores of SMU whether departments are combined or separated. PPT was then examined by its two smaller construct EOT and BF. No relationship is found between the mean scores of EOT or BF and SMU. However, when respondents are separated by their individual departments, a significant difference is found between the mean scores of BF and the mean scores of SMU among the respondents in planning and zoning (Table 5). An examination of the post hoc test revealed that one question (BF2), *My department is able to shift nonfinancial resources within budget to accomplish its mission*, shows significant differences between the means of emerging use and all

the other uses (Table 6). Planning and zoning managers who responded with higher levels of budget flexibility on question BF2 also responded with high levels of no social media use, advanced social media use, or collaborative social media use. After reviewing the post hoc test, it was determined that question BF2 could not be used to distinguish levels of social media use.

Based on this finding, PPT is having little, if any impact on SMU among the managers in this study. This means that something other than PPT is determining whether or not a manager in this study will adopt social media. This is a surprising find, as it was believed that political trust would have a stronger impact on managers who are considering whether or not to adopt social media. However, as shown in the next section, organizational resources do have an impact on levels of social media adoption. This may indicate that political trust has an indirect impact through the funding of department resources. Future research could examine if indirect or direct influences are occurring here by asking budget creation questions.

Table 4: One-Way ANOVA of BF to SMU for Planning and Zoning Respondents

		Sum of Squares	df	Means Square	F	Sig.
BF	Between Groups	3.423	3	1.141	4.445	.008
	Within Groups	12.577	49	.257		
	Total	16.000	52			

Table 5: Post Hoc Test of Question BF2 to SMU for Planning and Zoning Respondents

(I)SMU	(J)SMU	Mean Difference (I – J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
0	1	.635*	.189	.002	.25	1.01
	2	-.250	.380	.514	-1.01	.51
	3	.250	.166	.140	-.08	.58
1	0	-.635*	.189	.002	-1.01	-.25
	2	-.885*	.385	.026	-1.66	-.11
	3	-.385*	.177	.035	-.74	-.03
2	0	.250	.380	.514	-.51	1.01
	1	.885*	.385	.026	-.11	1.66
	3	.500	.374	.188	-.25	1.25
3	0	-.250	.166	.140	-.28	.08
	1	.385*	.177	.035	.03	.74
	2	-.500	.374	.188	-1.25	.25

*Perceive Organizational Culture*

The second larger construct measured in this study is POC. As with PPT, this construct was also examined at the larger and smaller construct levels. Ten questions in the survey are used to score the respondent’s perception of their organization’s culture. Two questions captured organizational innovativeness (OI), five reverse questions are used to capture autonomy and decentralization (AD), and three questions are used to capture organizational resources (OR). The alpha coefficient for all ten items is .689. This does fall below .7, but arguably the items still have an acceptable internal consistency. For OI, respondents with a total score of 7 or greater (agree to strongly agree) are considered to work in organizations that supported manager innovation and a score of 5 or less places them in organizations with cultures that do not support manager innovation. Based on this scoring, 57.9% of the respondents are seen as working in an

environment that allows for innovation, while 19.7% of the respondents are seen as working in an environment that discourage innovation. The remaining 22.3% of respondents are seen as working in an environment that neither favored nor discouraged innovation.

The five AD questions are separated into two groups: AD(a), which includes questions AD1 through AD3, and AD(b), which includes questions AD4 and AD5. The groups were separated because the first group are Likert type questions (strongly disagree to strongly agree), and the last two questions ask the respondent to rank red tape and bureaucracy within their city on a scale of 0 to 10. All of the AD questions are reversed so the coding is also reversed. After reverse coding the responses, those respondents who score 11 or higher on the AD(a) questions and score a 7 or higher on the AD(b) questions are considered to work in environments that are highly decentralized. The respondents who score 7 or less on the AD(a) questions and a 4 or less on the AD(b) questions are seen as working in an environment that was highly centralized. Respondents with scores in the middle, 8 to 10 and 5 or 6, are seen as working in environments that are moderately centralized/decentralized. The results are very mixed, with 32.3% of the respondents seen as working in an environment that is decentralized, 45.7% reporting an environment that is in the middle or moderately centralized, and 22% reporting an environment that is highly centralized. Finally, respondents who score 11 or higher on the OR questions are seen as having the necessary resources to use social media, while those who score 7 or less are deemed to work in an environment that did not have the necessary resources to use social media. Based on this scoring, 61.1% of the respondents are seen as having the necessary organizational resources needed to use social media, while 12.1% are seen as not having the necessary resources and 26.8% having some resources available to them.

As with the first construct, there is no significant difference found to exist between the mean scores of the larger construct POC and the mean scores of SMU when departments are combined or separated. However, when POC is separated into the smaller constructs, a one-way in-between groups ANOVA analysis shows relationships between the mean scores of the constructs OI and OR and the mean scores of SMU (Table 7). When reverse coded, AD(b) also shows a relationship with SMU (Table 7). When OI and OR are examined at the individual question level, OI1 *Most employees in this organization are not afraid to take risks*, OR1 *I have the necessary support and assistance to use social media*, OR2 *I have the financial and technological resources required to use social media*, and OR3 *I have access to the software, hardware and network services required to use social media*, are all found to have significant differences in the mean scores with SMU (Table 8).

Table 6: One-Way ANOVA of Smaller POC Constructs Combined Departments

		Sum of Squares	df	Means Square	F	Sig.
OI	Between Group	25.446	3	8.482	3.329	.021
	Within Groups	389.853	153	2.548		
	Total	415.299	156			
AD(b)	Between Groups	113.055	3	37.685	2.688	.049
	Within Groups	2131.169	152	14.021		
	Total	2244.224	155			
OR	Between Groups	155.457	3	51.819	8.112	.000
	Within Groups	977.295	153	6.388		
	Total	1132.752	156			

Table 7: One-Way ANOVA of POC Individual Questions to Social Media Use

		Sum of Squares	df	Means Square	F	Sig.
OI1	Between Group	8.108	3	2.703	3.414	.019
	Within Groups	121.115	153	.792		
	Total	129.223	156			
OR1	Between Groups	27.508	3	9.169	10.651	.000
	Within Groups	131.715	153	.861		
	Total	159.223	156			
OR2	Between Groups	11.697	3	3.899	3.604	.015
	Within Groups	165.513	153	1.082		
	Total	177.210	156			
OR3	Between Groups	17.108	3	5.703	6.619	.000
	Within Groups	131.822	153	.862		
	Total	148.930	156			

The post hoc test for question OR1 and OR3 shows significant differences between the means of no social media use and the means of the other three levels of social media adoption (Table 9), but cannot determine whether the adoption of social media will be emerging, advanced, or collaborative. The post hoc test for question OR2 shows significant differences between the mean scores of no social media use and both emerging and collaborative use. OR2 cannot determine between no social media use and advanced social media use.



Table 8: Post Hoc Test of OR Questions

	(I)SMU	(J)SMU	Mean Difference (I - J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
OR1	0	1	-1.012*	.234	.000	-1.47	-.55
		2	-1.075*	.282	.000	-1.63	-.52
		3	-1.081*	.200	.000	-1.48	-.69
	1	0	1.012*	.234	.000	.55	1.47
		2	-.062	.277	.822	-.61	.48
		3	-.069	.193	.720	-.45	.31
	2	0	1.075*	.282	.000	.52	1.63
		1	.062	.277	.822	-.48	.61
		3	-.007	.249	.978	-.50	.48
3	0	1.081*	.200	.000	.69	1.48	
	1	-.069	.193	.720	-.31	.45	
	2	-.007	.249	.978	-.48	.50	
OR2	0	1	-.673*	.262	.011	-1.19	-.15
		2	-.537	.316	.091	-1.16	.09
		3	-.716*	.224	.002	-1.16	-.27
	1	0	-.673*	.262	.011	.15	1.19
		2	-.135	.311	.663	-.48	.75
		3	-.043	.216	.842	-.47	.38
	2	0	.537	.316	.091	-.09	1.16
		1	-.135	.311	.663	-.75	.48
		3	-.179	.279	.522	-.73	.37
3	0	.716*	.224	.002	.27	1.16	
	1	.043	.216	.842	-.38	.47	
	2	.179	.279	.522	-.37	.73	
OR3	0	1	-.873*	.234	.000	-1.34	-.41
		2	-1.051*	.282	.000	-1.61	-.49
		3	-.687*	.200	.001	-1.08	-.29
	1	0	.873*	.234	.000	.41	1.34
		2	-.178	.277	.521	-.73	.37
		3	.186	.193	.337	-.20	.57
	2	0	1.051*	.282	.000	.49	1.61
		1	.178	.277	.521	-.37	.73
		3	.364	.249	.145	-.13	.86
3	0	.687*	.200	.001	.29	1.08	
	1	-.186	.193	.337	-.57	.20	
	2	-.364	.249	.145	-.86	.13	

The post hoc test for question OI1 had very interesting findings (Table 10). The mean scores show a significant decrease from no social media and emerging social media use to advanced social media use, and then an increasing significance between advanced use and collaborative use. This finding suggests that in departments where risk is rewarded, social media is most likely to be adopted at a high level of use or no use at all. In organizations where risk is not rewarded, social media is more likely to be adopted at the emerging level or advanced level. Again, this is different from what was predicted. Another interesting finding is that when this question was examined by individual departments, none of the departments show any significant difference in the means on question OI1. It was only when they are added together that there is a significant difference. Based on this finding, cannot be used to predict levels of social media adoption.

Table 9: Post Hoc Test for Question OI1

(I)SMU	(J)SMU	Mean Difference (I - J)	Std. Error	Sig.	95% Confidence Interval	
0	1	.194	.224	.389	-.25	.64
	2	.820*	.270	.003	.29	1.35
	3	.129	.191	.502	-.25	.51
1	0	-.194	.224	.389	-.64	.25
	2	.626*	.266	.020	.10	1.15
	3	-.065	.185	.726	-.43	.30
2	0	-.820*	.270	.003	-1.35	-.29
	1	-.626*	.266	.020	-1.15	-.10
	3	-.691*	.238	.004	-1.16	-.22
3	0	-.129	.191	.502	-.51	.25
	1	.065	.185	.726	-.30	.43
	2	.691*	.238	.004	.22	1.16

An examination of the post hoc test for AD(b) yields very interesting findings (Table 11). In AD(b) the only significance is found between no social media use and the advanced and collaborative levels of social media. The relationship also shows that the advanced and collaborative adoptions of social media tend to occur as authority becomes more centralized. This is completely opposite of what was predicted. As noted in Chapter Two, Yang and Pandey (2007; 2011) discovered that administrators are more likely to respond to citizens in decentralized organizations. This could show that just because an administrator is favorable to including citizens, it does not necessarily mean they perceive social media as the tool to engage them. As will be discussed in the next section there are some respondents who do not see social media as a useful tool for engaging citizens.

Table 10: Post Hoc Test for Construct AD(b)

(I)SMU	(J)SMU	Mean Difference (I – J)	Std. Error	Sig.	95% Confidence Interval	
0	1	.80000	.95158	.402	-1.0800	2.6800
	2	2.65294*	1.13671	.021	.4071	4.8987
	3	1.85844*	.80589	.022	.2663	3.4506
1	0	-.80000	.95158	.402	-2.6800	1.0800
	2	1.85294	1.12379	.101	-.3673	4.0732
	3	1.05844	.78755	.181	-.4975	2.6144
2	0	-2.65294*	1.13671	.021	-4.8987	-.4071
	1	-1.85294	1.12379	.101	-4.0732	.3673
	3	-.79450	1.00342	.430	-2.7769	1.1879
3	0	-1.858448*	.80589	.022	-3.4506	-.2663
	1	-1.05844	.78755	.181	-2.6144	.4975
	2	.79450	1.00342	.430	-1.1879	2.7769

A one-way in-between groups ANOVA analysis at the department level shows a significant difference between the mean scores of AD(b) and the mean scores of SMU for public

works (Table 12). Also shown, is a significant difference between the mean scores of OR and SMU for planning and zoning (Table 12). There is no significant difference between the scores of any constructs and the SMU for parks and recreation. An examination of the post hoc test for public works shows that as the organization becomes more centralized, social media is more likely to be adopted at a more collaborative use. This compares with the combined group findings, and again, opposite of what was predicted. For planning and zoning, the OR scores also align with the overall group scores showing that organizational resources can help predict whether or not social media will be adopted, but not at what level.

As a result, the larger POC construct in this study cannot be used to predict social media adoption levels. However, the smaller constructs OR and AB(d) can be used when the departments are combined to help predict social media use. For individual departments, the OR construct can be used alone to predict social media adoption in planning and zoning departments, and AD(b) can be used by itself to predict social media adoption for the public works departments. However, neither is able to distinguish between the levels of adoption (i.e., emerging, advanced, and collaborative).

Table 11: One-Way In-Between Groups ANOVA for Departments

			Sum of Squares	df	Means Square	F	Sig.
Public Works	AD(b)	Between Groups	122.977	3	40.922	3.358	.026
		Within Groups	586.004	48	12.208		
		Total	708.981	51			
Planning & Zoning	OR	Between Groups	99.604	3	33.201	4.548	.007
		Within Groups	357.679	49	7.300		
		Total	457.283	52			

### *Perceived Administrator Preconceptions*

The larger construct PAP captures the administrator's preconceptions of engaging citizens in public decisions and whether or not they perceive social media as a tool to engage citizens. PAP is built by combining the smaller constructs attitude towards use (AU), personal innovation (PI), perception of tool (PT) and willingness to engage citizens in the participation process (WCP). Together there are ten questions used to measure PAP. The alpha coefficient for all ten items is .607. Similar to POC this falls below .7, but still suggests that all ten items have an acceptable internal consistency. AU is captured by one question with a 7 point scale from extremely beneficial to extremely harmful. Scores are reverse coded. Respondents who score 5, 6 or 7 are seen as favorable using social media, those who score 1, 2 or 3 are seen as not favorable to using social media, and respondents who score 4 are considered indifferent. Using this scoring system, 95% of the respondents perceive social media as useful, with 2.5% perceiving the tool as harmful, and the other 2.5% indifferent to the impacts of social media.

Three five scale Likert type questions are used for PI. Respondents who score 11 or higher on these three questions are considered to be highly personally innovative, while those who score a 7 or lower are considered to have low personal innovation. Those in the middle are seen as somewhat innovative. Most of the respondents (63.7%) are seen as high innovators, followed by 29.3% being somewhat innovative, and 7% seen as low innovators. PT is captured by three questions on a Likert scale, and scored the same as PI. Those with a score of 11 or higher are seen as favorable toward using social media in their position, 7 or lower are seen as not favorable toward using social media at work, and all those with scores in between are seen as being somewhat favorable to using social media at work. A number of respondents also score

high in this category at 73.2%, with only 3.2% seen as not favorable, and 10.2% somewhat favorable.

The final measurement for PAP is willingness to engage citizens in the participation process` (WCP). This is captured by three questions. As with the questions above, those citizens who score an 11 or above are seen as more willing to engage citizens in the participation process whereas those who score a 7 or below are seen as less willing to engage in the participation process. All scores in the middle are considered somewhat willing to engage citizens. Most respondents are seen as willing to engage citizens, with 58.6% considered more willing to engage citizens, 37.6% somewhat willing to engage, and only 3.8% less willing to engage.

A one-way in-between groups ANOVA analysis shows a significant difference between the mean scores of PAP and the mean scores of SMU (Table 13). The post hoc analysis shows significant differences between no social media adoption and the other three levels of adoption, however, there is no significance between emerging adoption when compared to the advanced and collaborative levels of adoption (Table 14). There is a significant difference between the advanced and collaborative levels of adoption, but with no significant difference between emerging and the higher levels. A one-way in-between groups ANOVA analysis was conducted by combing advanced and collaborative social media use (Table 13), to see if doing so could help to predict lower and higher levels of social media adoption. This analysis again could only show whether or not social media would be adopted, but not at a specific level of adoption.

Table 12: One-Way ANOVA Analysis of PAP to Multiple Levels of Social Media Use

	Sum of Squares	df	Means Square	F	Sig.
PAP Between Groups	681.672	3	227.224	15.734	.000
Within Groups	2209.564	153	14.442		
Total	2891.236	156			

Table 13: Post Hoc Test of PAP to SMU

(I)SMU	(J)SMU	Mean Difference (I - J)	Std. Error	Sig.	95% Confidence Interval	
0	1	-4.25758*	.95865	.000	-6.1515	-2.3637
	2	-3.32353*	1.15364	.005	-5.6027	-1.0444
	3	-5.57792*	.81789	.000	-7.1937	-3.9621
1	0	4.257758*	.95865	.000	2.3637	6.1515
	2	.93405	1.13452	.412	-1.3073	3.1754
	3	-1.32035	.79068	.097	-2.8824	.2417
2	0	3.32353*	1.15364	.005	1.0444	5.6027
	1	-.93405	1.13452	.412	-3.1754	1.3073
	3	-2.25439*	1.01836	.028	-4.2663	-.2425
3	0	5.57792*	.81789	.000	3.9621	7.1937
	1	1.32035	.79068	.097	-2.417	2.8824
	2	2.25439	1.01836	.028	.2425	4.2663

A one-way in-between groups ANOVA analysis shows significant differences between AU, PI, PT, WCP and SMU (Table 15). An examination of the post hoc tests shows that the mean scores of those respondents not using social media is significantly different from those in the three levels of adoption in the constructs PI, PT and AU (Table 16). However, there is no significant difference across the levels of adoption. Therefore, these smaller constructs can only predict whether or not social media will be adopted, but not at what level. The results are the complete opposite for the construct WCP. The post hoc comparisons show a significant difference between the three levels of social media use, but no significant difference between all

three and no social media use. Still, there is no distinction between the emerging use and the advanced use, so this would be a difficult measure to help predict levels of social media use. Based on these findings, at the construct level, the administrator preconceptions are having a strong impact on social media adoption. Furthermore, the administrators' own innovativeness and perceptions of social media's usefulness appear to have the strongest PAP impact on their decision to implement social media, and it is their willingness to engage citizens in the process that impacts the levels of social media adoption.

Table 14: One-Way ANOVA of Smaller PAP Constructs

		Sum of Squares	df	Means Square	F	Sig.
PI	Between Group	75.632	3	25.211	5.811	.001
	Within Groups	663.820	153	4.339		
	Total	739.452	156			
WCP	Between Groups	40.026	3	13.342	3.336	.021
	Within Groups	611.872	153	3.999		
	Total	651.898	156			
PT	Between Groups	93.200	3	31.067	10.408	.000
	Within Groups	456.710	153	2.985		
	Total	549.911	156			
AU	Between Group	24.685	3	8.228	9.570	.000
	Within Groups	131.545	153	.860		
	Total	156.229	156			



Table 15: Post Hoc Test for PAP Smaller Constructs

				Mean Difference (I – J)	Std. Error	Sig,	95% Confidence Interval	
(I)SMU	(J)SMU	Lower Bound	Upper Bound					
PI	0	1	-1.75455*	.52545	.001	-2.7926	-.7165	
		2	-1.71176*	.63233	.008	-2.9610	-.4625	
		3	-1.78052*	.44830	.000	-2.6662	-.8949	
	1	0	1.75455*	.52545	.001	.7165	2.7926	
		2	-.04278	.62185	.945	-1.1857	1.2713	
		3	-.02597	.43338	.952	-.8822	.8302	
	2	0	1.71176*	.63233	.008	.4625	2.9610	
		1	-.04278	.62185	.945	-1.2713	1.1857	
		3	-.06875	.55818	.902	-1.1715	1.0340	
3	0	1.78052*	.44830	.000	.8949	2.6662		
	1	.02597	.43338	.952	-.8302	.8822		
	2	-.06875	.55818	.902	-1.0340	1.1715		
PT	0	1	-1.86061*	.43584	.000	-2.7216	-.9996	
		2	-1.42745*	.52449	.007	-2.4636	-.3913	
		3	-2.02944*	.37184	.000	-2.7640	-1.2948	
	1	0	1.86061*	.43584	.000	.9996	2.7216	
		2	.43316	.51580	.402	-.5858	1.4522	
		3	-.16883	.35948	.639	-.7890	.5413	
	2	0	1.42745*	.52449	.007	.3913	2.4636	
		1	-.43316	.51580	.402	-1.4522	.5858	
		3	-.60199	.46299	.195	-1.5167	.3127	
	3	0	2.02944*	.37184	.000	1.2948	2.7640	
		1	.16883	.35948	.639	-.5413	.8790	
		2	.60199	.46299	.195	-.3127	1.5167	

	(I)SMU	(J)SMU	Mean Difference (I – J)	Std. Error	Sig.	95% Confidence Interval	
WCP	0	1	.22424	.50447	.657	-.7724	1.2209
		2	.68235	.60708	.263	-.5170	1.8817
		3	-.70649	.43040	.103	-1.5568	.1438
	1	0	-.22424	.50447	.657	-1.2209	.7724
		2	.45811	.59702	.444	-.7214	1.6376
		3	-.93074*	.41608	.027	-1.7527	-.1087
	2	0	-.68235	.60708	.263	-1.8817	.5170
		1	-.45811	.59702	.444	-1.6376	.7214
		3	-1.38885*	.53589	.010	-2.4476	-.3301
	3	0	.70649	.43040	.103	-.1438	1.5568
		1	.93074*	.41608	.027	.1087	1.7527
		2	1.38885*	.53589	.010	.3301	2.4476
AU	0	1	-.86667*	.23391	.000	-1.3288	-.4046
		2	-.86667*	.28148	.002	-1.4228	-.3106
		3	-1.06147*	.19956	.000	-1.4557	-.6672
	1	0	.86667*	.23391	.000	.4046	1.3288
		2	.00000	.27682	1.000	-.5469	.5469
		3	-.19481	.19292	.314	-.5759	.1863
	2	0	.86667*	.28148	.002	.3106	1.4228
		1	.00000	.27682	1.000	-.5469	.5469
		3	-.19481	.24848	.434	-.6857	.2961
	3	0	1.06147*	.19956	.000	.6672	1.4557
		1	.19481	.19292	.314	-.1863	.5759
		2	.19481	.24848	.434	-.2961	.6857

When examined by individual departments, the constructs PT, WCP, and AU, and the individual questions, PT2 and PT3 have significant impacts in public works. WCP has an impact among parks and recreation, and the construct AU and question PI3 have significant impacts in planning and zoning. For planning and zoning, overall perception of the tool, including the two questions PT2 and PT3 that capture this perception, can help predict whether or not social media will be used, but cannot help predict the level once adopted. Willingness to participate with

citizens shows that at high levels of willingness, social media will either be adopted at the collaborative level or not at all. At low levels of willingness, social media is most likely to be adopted at the emerging use level. This may be occurring because managers are willing to participate with citizens, but may not think that social media is the best tool to use to engage citizens.

This may be explained in looking at the perception of social media as a good tool to use for engaging citizens. An examination of this construct shows that lower levels of perception related to no SMU whereas higher levels of perception led to higher levels of SMU. A one-way between groups analysis of variance was conducted to explore the impact of these three constructs on the levels of social media use and shows a significant difference between the means of the lower levels of social media implementation and the collaborative use of social media. The same test of significance was then applied to the other two departments, but they did not achieve the same results. Therefore, these PAP variables can only help to predict levels of SMU for public works. Willingness to engage citizens in the process can help us predict whether or not social media will be adopted in parks and recreation, but it cannot help us predict at what level it will be implemented. Finally, perception of the tools' usefulness and the individual question PI3 can help us to predict whether or not social media will be implemented in planning and zoning, but again, not determine at what level.

### *Perceived Public Influences*

The final relationship examined is between perceived public influences (PPI) and levels of SMU. Three smaller constructs PC (participant competence), PEC (previous experience with

citizens), and DPI (degree of public/media influence) are used to capture PPI. There are nine items altogether that are used to capture PPI. The alpha coefficient for these nine items is .743. This suggests that these items have relatively high internal consistency. PC and PEC questions are scored based on a possible 5 points (strongly disagree to strongly agree) and DPI questions are scored based on a possible 3 points (no influence, some influence, great deal of influence). As with previous 5 point questions, the first two sets of questions placed respondents with scores of 11 or higher in environments that are favorable to citizen engagement and scores of 7 or less in environments that are less favorable to engaging citizens. Scores in the middle are seen as somewhat favorable to citizen engagement. For DPI, respondents who score 7 or higher are seen as being in environments that were highly influenced by the public, scores of 3 or less are seen as environments with no public influence, and scores of 4, 5 or 6 are seen as having some influence.

Using these scores, 28.7% of the respondents perceive that citizens have a high degree of the necessary skills to participate in decision making, 40.8% perceive that citizens somewhat have the necessary skills to participate, and 30.6% perceive that citizens have little to none of the necessary skills to participate in public decision making. For prior experience with citizens, 73.9% of respondents agree that they had good experiences when engaging with citizens in the past, 24.8% are in the middle with their prior experiences, and >1% say that they did not have good experiences when engaging citizens in the past. For degree of public influence, 45.9% of respondents indicate that public opinion has a great deal of influence over them, 52% indicate that public opinion has some influence over them, and 2.5% indicate that public opinion has no influence on them.

A one-way in-between groups ANOVA analysis shows no significant difference between the mean scores of the larger construct PPI and the mean scores of SMU. Even when broken into its smaller constructs, no relationship is found among the levels of social media use. However, when DPI is examined at the individual question level, a one-way in-between groups ANOVA analysis of the question DPI1 *How much influence does public opinion exert over your department?* is found to have a significant difference with SMU (Table 16). A post hoc test examination shows that DPI1 has significant differences in the means between no social media use and both advanced and collaborative social media use, and significant differences between emerging social media use and advanced social media use. DPI2 and DPI3 have no effect on levels of SMU when departments are combined. When examined by individual department, only public works shows an impact in a one-way in between-groups analysis of DPI. The individual question DPI2, *How much influence does public opinion exert over your department?* shows a significant impact between the mean scores of the lower and higher end social media uses.

Therefore, while overall PPI is not influencing levels of social media use among respondents, it appears that “public opinion” does have some level of impact on social media use. However, as with PPT, PPI as a construct appears to have little if any impact on the managers in this study. Again, there may be an indirect impact or it may be that managers believe it is important to engage with citizens, but do not believe social media is the appropriate tool for engaging them. More investigation is needed to understand the public influence on social media adoption.

Table 16: One-Way ANOVA of Question DPI1 to Social Media Use

	Sum of Squares	df	Means Square	F	Sig.
DPI1 Between Group	3.946	3	1.315	4.093	.008
Within Groups	49.162	153	.321		
Total	53.108	156			

Table 17: Post Hoc Test of DPI1

(I)SMU	(J)SMU	Mean Difference (I - J)	Std. Error	Sig.	95% Confidence Interval	
0	1	-.142	.143	.321	-.42	.14
	2	-.547*	.172	.002	-.89	-.21
	3	-.303*	.122	.014	-.54	-.06
1	0	.142	.143	.321	-.14	.42
	2	-.405*	.169	.018	-.74	-.07
	3	-.160	.118	.176	-.39	.07
2	0	.547*	.172	.002	.21	.89
	1	.405*	.169	.018	.07	.74
	3	.244	.152	.110	-.06	.54
3	0	.303*	.122	.014	.06	.54
	1	.160	.118	.176	-.07	.39
	2	-.244	.152	.110	-.54	.06

### Step 3: Analysis of Five Proposed Environments to Social Media Adoption

Using the influences identified in the previous step, an analysis was conducted of the five environments to levels of social media adoption as proposed in Chapter Two. The results of that analysis are presented in the sections that follow. Table 4 provides a summary of findings for the proposed environments to social media adoption.

Table 18: Summary of Findings: Department Environment to Social Media Adoption

Hypothesis	Finding	Comment
<p><b>H<sub>5</sub></b> – A public administrator responding in a closed environment, will most likely choose not to adopt social media.</p>	<p>Rejected</p>	<p>There are little to no perceptions of political influence on the administrator’s decision to adopt social media, and an administrator is more likely to use social media than not. As predicted, organizational resources and innovation, and perceived administrator preconceptions also held up as predicted, and in this environment are most likely to result in no social media use. Based on these findings, the administrator is most likely being coerced into social media adoption.</p>
<p><b>H<sub>6</sub></b> – A public administrator responding under the coerced environment is most likely to implement an emerging social media use.</p>	<p>Mixed Results</p>	<p>Since the organization is centralized, it is more likely to have a centralized social media policy. An administrator not wanting to adopt social media for their department is more likely to find that they are being coerced to do so in this environment.</p> <p>Social media is most likely to be adopted, but at what level cannot be predicted.</p>
<p><b>H<sub>7</sub></b> – A public administrator responding under the constrained environment is most likely to implement an emerging social media use.</p>	<p>Rejected</p>	<p>There is little to no perceived political influences to constrain the administrator, and even if the organization is beginning to decentralize, then study results would suggest that the administrator would most likely choose not to adopt social media. Therefore, he or she is not being constrained.</p>

Hypothesis	Finding	Comment
<p><b>H<sub>8</sub></b> – A public administrator responding under the consulting environment is most likely to implement an advanced social media use.</p>	<p>Rejected</p>	<p>Perceived political trust and perceived public/media influence have little to no impact on social media adoption. Additionally, even though the administrator has a high faith in using social media to engage citizens, a decentralized organization is more likely to result in no social media adoption.</p>
<p><b>H<sub>9</sub></b> – A public administrator responding under the collaborative environment is most likely to implement a collaborative social media use.</p>	<p>Rejected</p>	<p>Perceived political influences showed little to no influence in this study. Previous studies have shown that a high level of trust leads to administrator autonomy, so it is difficult to determine whether or not this makes a difference in evaluating this environment. The study showed little to no public/media influence, and a decentralized organization is most likely to result in no social media adoption.</p>

*Closed Environment*

The first environment proposed in Chapter Two is a closed environment. A closed environment is one in which there are low levels of perceived political trust, a highly centralized organizational culture that discourages innovation, and has little to no resources to support social media use. The administrator has little faith in technology, no desire to be innovative, and does not trust the citizen engagement process. There is little, if any, perception of public influence, administrators have had negative experiences engaging with citizens in the past, and there is little faith that citizens have the knowledge needed to contribute in any meaningful way. It was predicted that in such an environment the administrator would see the political leaders and the



organization as the strongest stakeholder. As such, they would perceive responsiveness to citizens as professionally running the organization based on management expertise. Therefore, a public administrator responding in a closed environment would most likely choose not to adopt social media.

This hypothesis does not hold true based on the results of this study. First, there is little to no perception of political influence on the administrator's decision to adopt social media. Second, authority and decentralization has the opposite impact from what was predicted. An administrator working in a more centralized organizational culture is more likely to adopt social media. As predicted, little to no organizational resources and innovation are most likely to result in no social media adoption. Perceived administrator preconceptions also hold up as predicted in this environment and are most likely to result in no social media use. Perceived public influences show very little impact on social media adoption and make no difference in this environment, as a closed environment has little public influence. Based on these findings, the administrator is most likely being coerced into social media adoption. The centralized culture may also provide the necessary resources and be more supportive of innovation, further coercing the administrator into social media use. Based on the results, social media is most likely to be adopted. However, it cannot be predicted whether the adoption will be emerging, advanced, or collaborative. Future research is needed to help predict these levels.

### *Coerced Environment*

The second proposed environment is coerced. This environment has the same environmental influences as the closed environment, except in this environment there is pressure

from politicians or the organization to adopt social media. The administrator is still managing in a very centralized environment and responding to organizational pressures. As a result, it was hypothesized that a public administrator responding under the coerced environment is most likely to implement an emerging social media use. Unlike the first environment, the results here are mixed. Again, perceived political trust had little, if any, impact on social media adoption. However, as shown in this study, a highly centralized culture is most likely to result in an adoption of social media, and therefore, these administrators are more likely being coerced into adopting social media. There is still little or no public influence. As noted in the closed environment, social media is most likely to be adopted, but the level of adoption cannot be predicted.

#### *Constrained Environment*

The third proposed environment is constrained, and it is completely flipped from the coerced environment. Here, the manager has a good understanding of social media and perceives adopting social media as good for their department and engaging with citizens. However, the administrator feels constrained by political influences or the highly centralized organizational culture. Even though the administrator has faith in the public participation process, there is very little public pressure to use this tool. As a result, a public administrator responding under the constrained environment is most likely to implement an emerging social media use.

Unfortunately, as with the closed environment, this hypothesis is not supported. As with the first two environments, perceived political trust and perceived public influences have little to no impact on social media adoption. Also, a more centralized government is likely to support social

media adoption. In this environment, the administrator is not constrained. Even if the organization is beginning to decentralize, the study results would suggest that the administrator would most likely opt not to adopt social media. Therefore, he or she is not being constrained. Based on the results, it is hard to predict whether or not social media will even be adopted, much less predict the level of adoption.

### *Consulting Environment*

The fourth environment is consulting. A consulting environment is perceived as more decentralized and having the strongest political support. The manager perceives more discretionary power on whether or not to adopt social media. He or she has a high level of comfort with social media, sees its value for engaging citizens, and has a high level of trust in the participation process. There is increased public interest in using social media, but the interactions between the administrator and the citizen do not result in any meaningful policy changes. It was hypothesized that administrators responding under the consulting environment are most likely to implement an advanced social media use. This also was not supported as proposed, as perceived political trust and perceived public/media influence were found to have no impact on social media adoption. Additionally, even though the administrator has a high faith in using social media to engage citizens, a decentralized organization is more likely to result in no social media adoption. In this environment, it is most likely that social media will be adopted. Future studies would need to be conducted to determine in what cases and at what levels social media may be adopted in this environment.

### *Citizen-Centered Collaborative Environment*

The final proposed environment is citizen-centered collaborative. The collaborative environment builds on the consulting environment. In this environment, there is high perceived political trust and a highly decentralized organization. The administrator has high faith in social media use and the collaboration process, and there is high public/media support. The difference in this environment is that administrator-citizen interactions lead to the creation and implementation of policy. This environment was also not supported by the study. Perceived political influences showed little to no influence in this study. Previous studies have shown that a high level of trust leads to administrator autonomy, so it is difficult to determine whether or not this makes a difference in evaluating this environment. The study showed little to no public/media influence, and a decentralized organization is most likely to result in no social media adoption. Therefore, levels of social media adoption cannot be predicted in this environment through this study.

### Discussion of Findings

Even though this study is not able to link the proposed environments to specific levels of social media adoption, there is valuable information that can be gained from the results. This section examines and discusses this information. Provided that response rate bias is not occurring (Sheehan, 2001), there are two possible explanations for the results in this study. The first possible explanation is that the impact of environmental influences on levels of social media adoption change the longer social media is used. This explanation is based upon the finding that there is an overall high level of current social media use and the discovery that perceived political and

public influences seem to have no impact on levels of social media adoption. The second possible explanation is that public administrators may be operating in a rational environment when deciding to adopt social media. This second explanation is based primarily on the discovery that perceived political and public influences seem to have no impact on levels of social media adoption. Both of these possibilities are explained in the sections that follow.

#### *First Possible Explanation of Study Findings*

The first possible explanation for what is occurring among the department managers is that environmental influences change the longer social media is used. Updating the proposed model of social media adoption (Figure 8) from Chapter Two will help to explain this change. The updated model (Figure 10) is created by combining the results of this study with the two models of technology adoption presented in the literature review (Figures 6 & 7). The updated model stays on a continuum that goes from no social media adoption to collaborative social media adoption, but the two levels in between are updated to initial and participatory social media adoption. The 49% that have adopted collaborative social media tools are placed into collaborative social media adoption. This stage is created by combining the open collaboration level from the open government maturity model (Lee & Kwak, 2012) and the vertical integration stage from the model of e-government adoption (Layne & Lee, 2001). The 11% that responded with advanced social media use are placed into participatory social media adoption. This stage is created by combining the open participation level (Lee & Kwak, 2012) with the transaction stage (Layne & Lee, 2001). The 22% who have adopted only one-way information sharing are placed into initial social media adoption. This stage is created by combining the data transparency level

(Lee & Kwak, 2012) with the catalogue stage (Layne & Lee, 2001). This leaves 18% with no social media adoption. Added together 82% of respondents are using some level of social media in their department to engage citizens.

As Layne and Lee (2001) show in their catalogue stage, governments create limited websites due to pressure from internal or external managerial or institutional pressures (Jun & Weare, 2011; Layne & Lee, 2001). If perceived political and public influences are looked at as external pressures and perceived organizational culture and perceived administrator preconceptions are seen as internal pressures, then in the first step of social media adoption they would all arguably have an equal chance of influencing social media adoption (Figure 11). This moves the department from no social media use to initial social media use. However, influences change the longer a department uses social media. The longer social media is used by the organization it moves beyond this initial stage of adoption towards two-way communications and eventually becomes part of an organization's cultural norm and more formalized. The results show that 10% of the respondents have moved beyond this initial adoption of social media into participatory social media adoption and 49% into the collaborative social media adoption.

The high levels of social media adoption suggests that using social media to interact with citizens is no longer the exception in citizen engagement, but rather the norm and that is why so many respondents are now using it at the higher collaborative level. A majority of the social media interactions in the study have moved beyond one-way information sharing. It is possible that the external pressures that played a role in adopting social media no longer have the same influence as they once did in moving the departments from no social media use to initial social media use. Instead internal pressures such as an administrator's own perceptions of the tool or

formal policy guidelines from upper management are now being used to help determine how the tool is used (Figure 12). This would explain the disconnect among the high levels of political trust, medium to high levels of public influences, and levels of social media adoption.

Unfortunately this study did not ask how long departments have been using social media and any future studies should include this question to examine if these influences are changing over time.

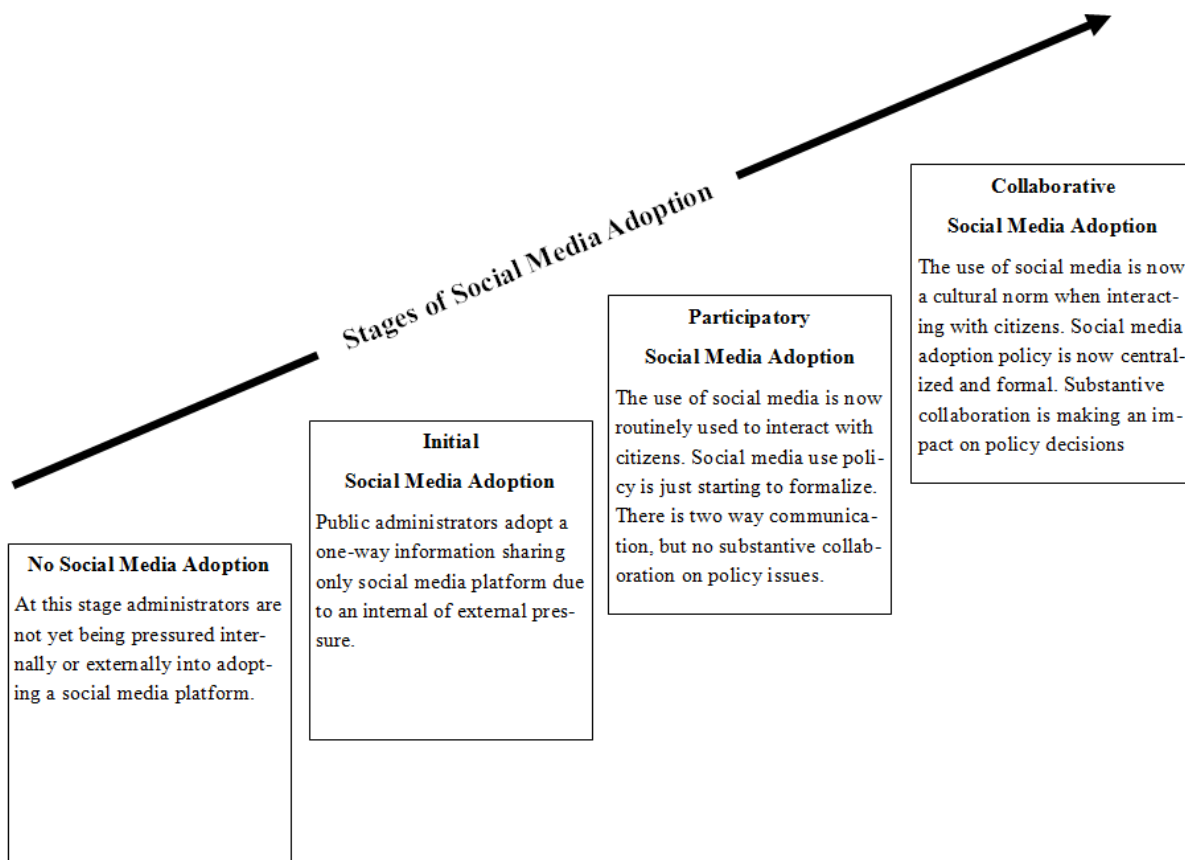


Figure 10: Stages of Social Media Adoption

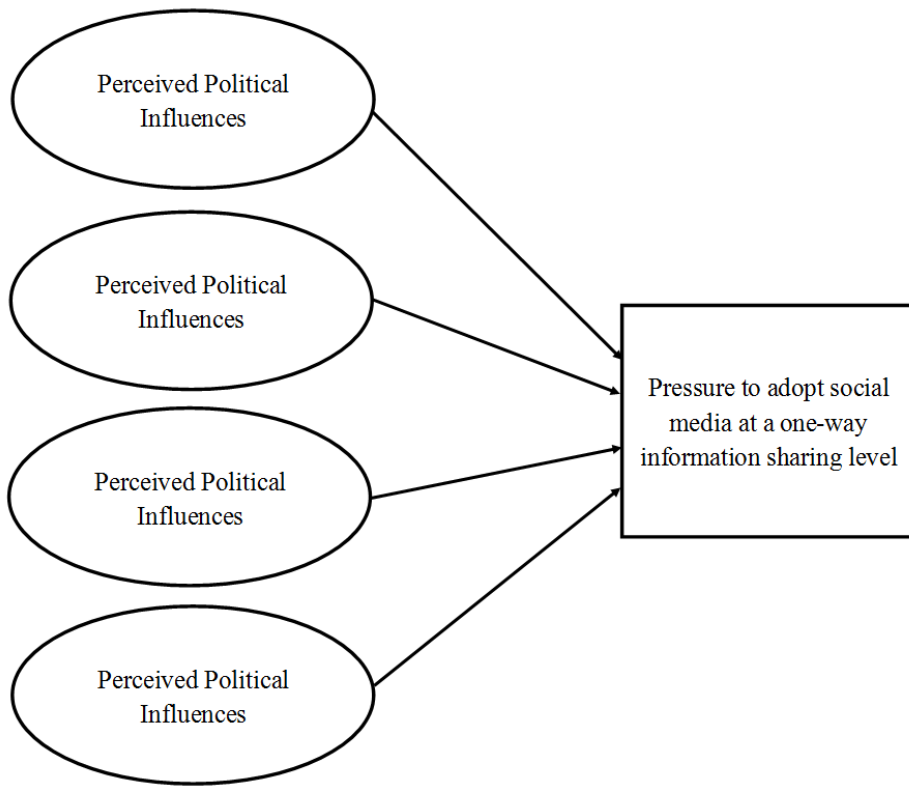


Figure 11: Internal and External Pressures for Early Stages of Social Media Adoption

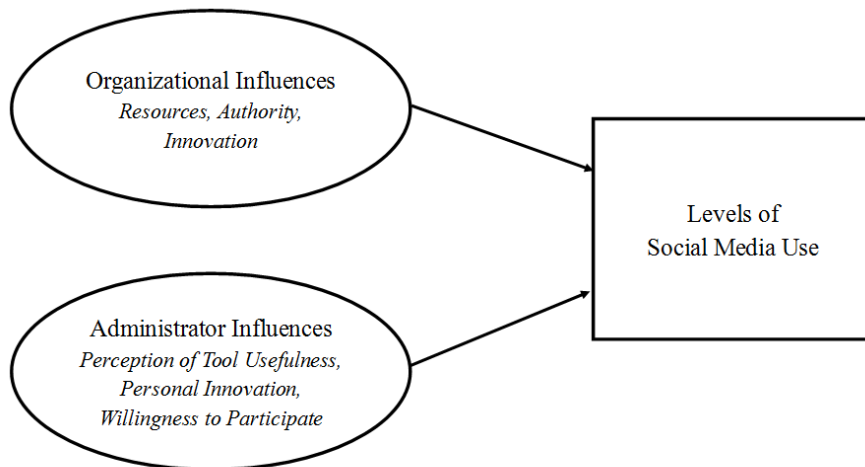


Figure 12: Internal Pressures for Collaborative Levels of Social Media Adoption



### *Second Possible Explanation of Study Findings*

There is another possible explanation for the findings in this study. The results show that some of the perceived organizational influences and perceived administrator preconceptions have an impact on levels of social media adoption (Figure 11). Almost all of the respondents (89.5%) said that they reported to a city manager, chief executive officer, or an oversight board (e.g., planning and zoning board, parks and recreation board). It may be that many of the respondents are operating in rational environments when it comes to the adoption of social media (Figure 12). This rational environment differs from the first possible explanation in that it is independent from the length of social media use. In a rational environment managers are primarily focused on standardization, identifying the specific tasks that need to be completed, and allocating the necessary resources to complete these tasks (Scott & Davis, 2007).

Under this rational environment the administrator could perceive positive elected official trust in their department, but the influence has little to no impact on social media adoption. This would also explain why perceived political influences do not appear to have any impact on social media adoption. An administrator may believe it is important to engage with citizens, but not see the adoption of social media as the right tool for this engagement. While engaging with citizens is positively viewed, the manager's highest priority is internally focused on managing the organization. In this rational environment the department manager is then implementing social media policy based primarily on their perceptions of organizational and administrator influences.

In a more centralized city administration the policies will be more unified and come from upper management (Mergel & Bretschneider, 2013), which may explain why respondents in more centralized administrative structures are more likely to adopt social media. Additionally,

Mergel and Bretschneider (2013) show organizations will eventually initiate some form of standard-setting to reduce the problems that occur when individual departments adopt multiple forms of social media on their own. Department managers are adopting social media for the first time as a result of isomorphism (DiMaggio & Powell, 1983). Full adoption of social media will most likely occur where the administrator has the resources and has a positive view of social media as a tool for engaging citizens. In an opposite environment, the administrator may perceive that they are being coerced into using social media. The diversity in the adoption may be caused by secondary influences such as decoupling (Lines, 2005). This is an area for future research.

For managers in a decentralized environment, as Moynihan and Lavertu (2012) explain, they are more likely to stick with the status quo than to adopt technology. This may explain why social media is less likely to be adopted in a decentralized environment. However there will be some adoption of social media in decentralized environments. In a decentralized environment it is the administrator that has the primary level of influence on social media adoption. This would leave organizational culture as a secondary influence. The diversity of adoption is then occurring because of the administrator's perceptions of the tools usefulness and perceptions of department resources. This may also be a result of decoupling (Lines, 2005). This is another area for future research.

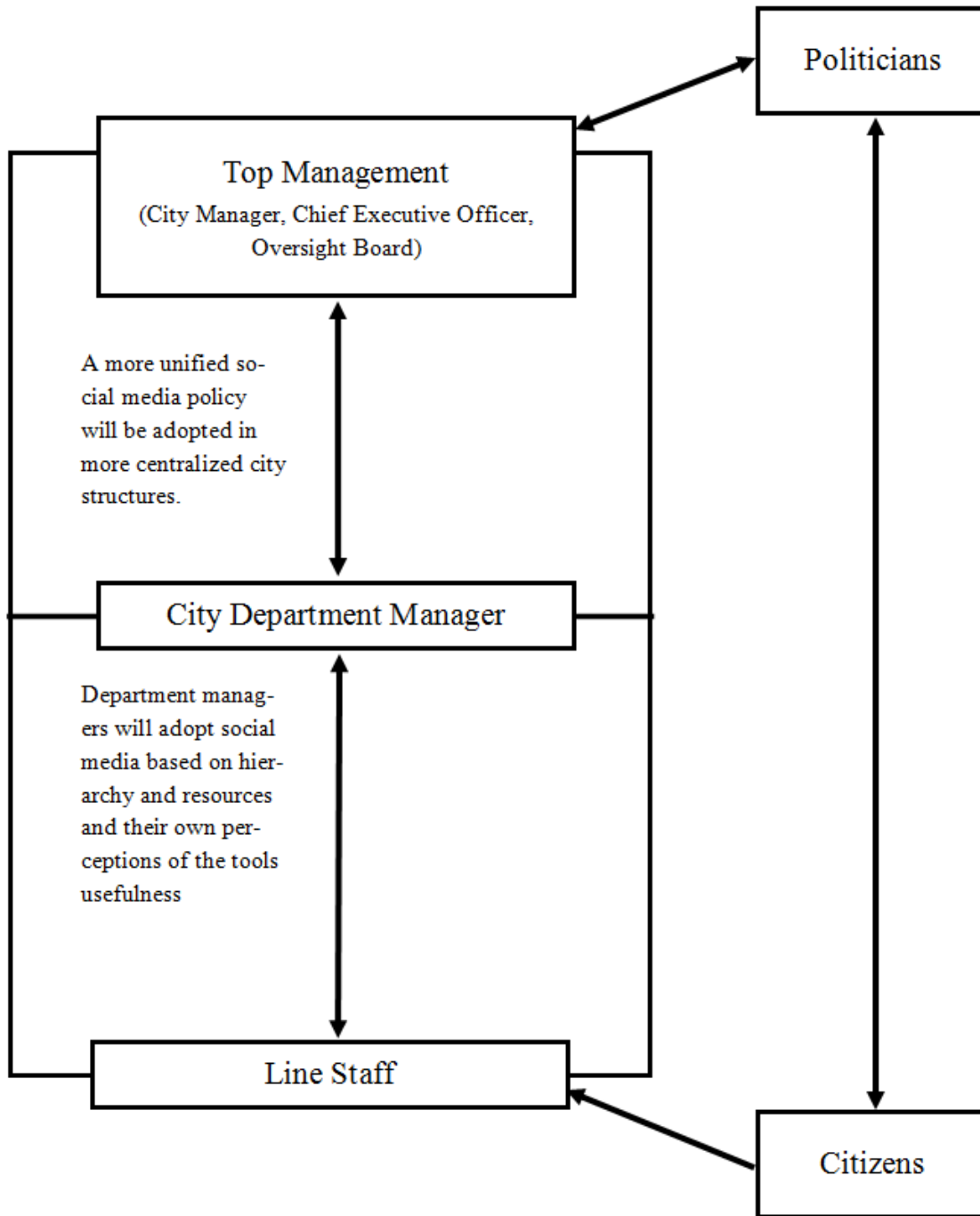


Figure 13: Rational Organization Adoption of Social Media

## Chapter Summary

This chapter analyzed and discussed the data that was collected. In reviewing the data, it was discovered that a large number of the respondents are using some form of social media, including a high number that are using collaborative social media. It was also discovered that only certain perceived organizational influences and perceived administrator preconceptions appear to have any impact on social media adoption policy at the department manager level. There are two possible explanations for these findings. One is that the levels of social media adoption are based on how long the department has been using social media. The other possible explanation is that department managers are working in a rational environment when they are considering whether or not to adopt social media tools and at what level they should be adopted. The final chapter offers a summary of findings and addresses the theoretical and practical implications of these findings, the study limitations, and directions for future research.

## CHAPTER FIVE: CONCLUSION

### Introduction

The ongoing struggle in public administration that has centered on the politics-administration dichotomy appears to be just as prevalent today as it was in public administration's infancy. Today, it can be seen in the ongoing decisions to adopt social media tools for administrator-citizen engagement. Public administration research and literature provide a strong argument for including citizens in public administrative decision making and also for the use of social media tools to increase administrator-citizen collaboration. However, there are some public administrators who opt to limit the full collaborative potential of social media tools if they decide to adopt them at all. This study examined perceived political influences, perceived organizational culture, perceived administrator preconceptions, and perceived public influences to identify their roles in the diverse implementation of social media tools. Five administrative environments are created from these influences to help predict levels of social media adoption. Although this study could not link the administrative environments to specific levels of social media adoption, it is able to use these findings to offer possible explanations for the diverse levels of adoption and provide avenues for future research. The findings, study limitations, theoretical and practical applications, and avenues of future research are explained in this chapter.

### Summary of Main Findings

This study found that a high number of respondents are using social media tools to engage with citizens. When respondents are broken into levels of social media adoption, 21% have adopted social media at an emerging level, 11% have adopted social media at an advanced level, and 49% are at a collaborative social media adoption level. This leaves 18% of managers who are not using social media. There is a possibility that response rate bias is occurring in this sample. The first possible cause for a response rate bias is the time of year that the survey was administered, mid-summer to early fall. There were several automated e-mail replies to the survey invitations indicating that department managers were on leave. These managers may have been overwhelmed by e-mails or felt they did not have the time to complete a survey after returning from their leave. Other managers (or their assistants) indicated that they were in the middle of budget sessions and would try to complete the surveys if they could. In either situation, there may have been competing factors that discouraged the managers from taking the survey. As a result, only managers who perceived this issue as important to them may have responded to the survey. Sheehan (2001) notes that this will cause a response rate bias.

#### *Natural Social Media Adoption*

If response rate bias is not occurring, then it is possible that using social media to engage citizens may no longer be the exception to the rule, but rather it has now become the norm. This is based upon the fact that there is a high level of social media use, perceived political and public influences appear to have no impact on levels of social media adoption, and that a centralized organizational culture appears to encourage rather than discourage social media adoption. Just as

the adoption of e-government began with one-way information sharing and slowly evolved into an integrated one-stop shop of government services (Layne & Lee, 2001), it is possible that social media is simply following the same natural progressive course. If so, then a department manager who is initially considering whether or not to adopt social media would be equally influenced by external and internal pressures. A manager responding to internal pressures would be considered more organizationally focused and one responding to external pressures as more collaboratively focused (Jun & Weare, 2011).

At the initial adoption stage external pressures would include responding to politicians who want the department to adopt social media, to a vendor who has set up social media tools with other cities, or to the best practices of other cities. Internal pressures would include the manager's own desire to use social media, responding to an upper management policy that is moving the city towards a uniform adoption of social media tools, or responding to a request from their IT department to test a social media product. However, if social media is following the e-government model then these influences change the longer social media is used by the department. The longer social media is used external pressures weaken in influence and internal pressures strengthen in influence. Since there is a high level of social media use among respondents, including the fact the 60% are using social media beyond the initial adoption stage, this would explain why perceived political and public influences seem to have no impact on social media adoption.

### *Adoption of Social Media in Rational Environments*

There is another possibility occurring among these respondents. Department managers may be operating in a rational environment (Scott & Davis, 2007) when deciding whether or not to adopt social media tools. Unlike the first environment internal pressures are the only influences on social media adoption at any level. This is based on the fact that perceived political and public influences appear to have no impact on levels of social media adoption and a centralized organizational culture is encouraging rather than discouraging social media adoption. In such an environment, politicians and citizens are seen as external stakeholders that may have an indirect influence on the department manager.

This leaves perceived organizational influences and perceived administrator preconceptions as having the greatest impact on levels of social media adoption. In this rational environment, the chief executive or oversight board is at the top, the department manager is in the middle, and the line staff are at the bottom of the structure (Chapter Four, Figure 13). Political and public influences are entering the organization through the line staff or through the top management and the manager is primarily focused on managing their department, taking their direction on social media policies from organizational policy or based on what they see as best for their department. This would also explain why perceived political and public influences seem to have no impact on social media adoption.



## Implications and Recommendations

### *Theoretical Implications and Recommendations*

There are three main discoveries from this study: (1) the identification of high levels of social media use among city departments; (2) the identification that perceived organizational culture and perceived administrator preconceptions seem to have the only impact on a department manager's decision to adopt social media in large cities; and (3) the discovery that social media is more likely to be adopted in a city that has a centralized administrative structure. These findings add to the current research in administrative responsiveness and the adoption of social media in public organization by the creation of two models: a four stage model of social media adoption and a rational model for social media adoption. The findings in this study also support the argument that the decision to adopt social media is an extension of the politics-administration dichotomy. It also shows that managers may be operating in a politics-administration dichotomy paradox when selecting and then using social media tools to engage citizens. Each of these additions to the field is explained in the sections that follow and all offer areas for future research.

### Possible Response Rate Bias

Before moving into the contributions, the possibility of response rate bias must be addressed. The sample may include a large number of department managers who are in favor of using social media to engage citizens and not reflect the true levels of social media use among the population. This would explain the surprisingly high level of social media use in the survey results. This would also have an impact the contributions to the field. It is therefore

recommended that this study be repeated. However, the population should be expanded in the next study to include more departments and smaller cities. This will help to gain a better picture of social media use in city departments. Another recommendation is to administer the survey at a different time of year. This may reduce the number of conflicting priorities among managers and help to increase the number of responses.

#### First Contribution: A Four Stage Model of Social Media Adoption

The first addition to the field of public administration is a four stage model of social media adoption (Chapter Four, Figure 10). This model is created based on the findings in this research and the combination of two previous models from earlier research: the four levels of e-government adoption model (Figure 6) offered by Layne and Lee (2001) and the five levels of open government maturity model (Figure 7) offered by Lee and Kwak (2012). This updated four stage model of social media is shown on a continuum that moves from no social media use to collaborative social media use (Chapter Four, Figure 10). The results of the study show that 49% of respondents are using social media at the collaboration level, 11% are using social media at the participatory level, 22% have adopted only one-way information sharing social media tools at the initial stage, and 18% have no social media adoption. This shows that 60% of current social media use has moved beyond one-way information sharing only social media use and 82% are using social media altogether. These levels suggest that social media use is no longer the exception in citizen engagement, but rather the norm. A second survey should be conducted to confirm these stages of adoption. The survey should include a question about length of social

media use. This would show whether or not the levels are occurring in progressing stages over time.

A study of the length of social media use can also help to determine if external and internal pressures are having equal or differing impacts at different stages of adoption. According to the results, perceived organizational culture and perceived administrator preconceptions have the most impact on social media use and perceived political trust and perceived public influence have little if any impact. It may be that values used to measure the impact of environment to citizen engagement do not work for capturing environment to social media adoption. It may also be that the decision to initially adopt social media can come from both internal and external pressures, but this changes the longer it is used. This would support the finding that centralized administrative environments are more likely rather than less likely to use social media. Most of the respondents in this study are using social media at the participatory and collaborative levels. As explained earlier this may be due to the fact that most organizations tend to gravitate towards a standardized social media use policy the longer it is used within the organization (Mergel & Bretschneider, 2013). This is supported by both earlier models.

The discovery that more centralized cultures support social media adoption was different than expected based on the previous research conducted by Bryer (2006) and Yang and Pandey (2007; 2011). Their research suggests that an administrator operating in a decentralized environment is more likely to engage citizens in the deliberative process. This does not hold true with social media adoption. This would show that measures for capturing environment to citizen engagement cannot be used to capture environment to social media adoption. This suggests the

possibility that there are more influences on a manager to initially adopt social media than there are when deciding to take social media to the higher levels of adoption. This would offer another area for future research and follows the original goal of this paper which is to identify what influences an administrator to adopt social media and at what level.

Finally, both previous models of technology adoption (Figures 6 & 7) show a final stage of adoption that involves a horizontal integration of tools. For e-government this was the creation of a one-stop government website. A citizen could enter the website of one level of government and then connect to almost any government agency or public service provider at any level of government from this one website (Layne & Lee, 2001). The open government maturity model also provided a one-stop shop stage but for social media. Whether or not response rate bias is occurring in this study, further research is needed on this possible natural progression of social media adoption. This research should also look into a possible fifth stage of social media adoption. This would include standardization practices and the possibility of a social media one-stop shop in public organizations.

#### Second Contribution: A Rational Model of Social Media Adoption

The second contribution to the field of public administration is a rational model for social media adoption (Chapter Four, Figure 13). This model is built upon the results of this study and influences do not change based on length of social media use. The first model presented above shows city managers moving into a rational decision making environment after using social media for a period of time. In this model city managers are seen as working in a rational environment regardless of how long they have been using social media. By working in this

rational environment, managers view political and public influences as external participants who enter the system through either upper management or line staff. While department managers are able to perceive political trust and public influences, they have little, if any impact on their decision to adopt social media.

Again, this contrasts with previous environment to citizen engagement findings. In this model department managers are primarily focused on managing their department, and the decision to adopt social media comes from a centralized social media adoption policy or their own perceptions of internal influences. Administering this study again with the recommendations above should help to determine if managers are operating in a rational environment when choosing to adopt social media tools. Political influences may be impacting social media through resource allocations in the budget. This study did not have a question that linked resources to budget allocations by politicians. Also, there is no way in this survey to determine if social media policy is coming from the organization's senior management (city administrator or oversight board) or the politicians. A closer examination of where politicians are connecting to department managers would help to better determine the real impact of perceived political influences.

### Third Contribution: The Politics-Administration Dichotomy

The third contribution to the field of public administration is support for the politics-administration dichotomy. It was suggested in Chapter One that the decision to include citizens in public administrative decisions is not a new argument, but rather an extension of the politics-administration dichotomy struggle. It was then suggested in Chapter Two that the dichotomy is found to exist between administrators who are more organizationally focused and those who are

more collaboratively focused. This can be seen among the department managers in this study. There is also a possibility of a politics-administration dichotomy paradox occurring among the managers in this study. The dichotomy paradox can be found in this study in two ways. First, it exist in the adoption versus use of social media. Adoption and use are seen as two separate actions in this paradox. Adoption encompasses the influences that lead the manager to use social media and use encompasses how it is used after it has been adopted. For example, a manager can initially adopt social media for citizen engagement from external pressures, but then uses social media at a limited level. This shows a paradox. Even though this would seem to show a collaboratively focused manager when social media is adopted, social media is adopted then used in a one-way information sharing manner more common in managers that are more organizationally focused. Managers may move towards the collaborative side of the continuum when deciding whether or not to initially adopt social media, but they never completely move away from the organizational focus.

Mergel and Bretschneider (2013) note that most organizations tend to gravitate towards a standardized social media use policy the longer it is used within the organization. This is supported by the two models for e-government (Layne & Lee, 2001) and open government (Lee & Kwak, 2012) adoption. If a second study confirms that higher levels of social media use are associated with length of use, then it would show that this paradox continues at the higher levels of social media adoption. Unlike the earlier manager who may be responding to external pressures when deciding to use social media, the manager who has been using social media for some time is now going to look internally for guidance on social media policy. If this policy leads to more collaborative social media use then another paradox seems to exist. Managers are

more organizationally focused when deciding to adopt social media, but they are adopting it at a more collaboratively focused level.

The paradox also seems to exist in how managers view citizen engagement and how they view the use of social media tools to engage citizens. Measures that are used in this study to examine environment to social media adoption have been used in previous studies to measure environment to citizen engagement. What are seen as external environmental pressures (perceived political and public influences), show no impact on levels of social media adoption. Even some internal influences show no impact on levels of social media adoption. It may be that these measures do not work for social media, because administrators see citizen engagement and the use of social media tools to engage citizens from two different points of view. For example, and manager may be collaboratively focused in when it comes to citizen engagement, but organizationally focused when deciding whether or not to adopt social media tools for that engagement.

An organizationally focused manager may see adopting fully collaborative social media tools as taking away resources that could be used somewhere else in the department. Even though they are in support of interacting with citizens, they are not in support of using social media tools for that engagement. This creates a paradox between engagement and the selection of social media tools. This might explain the difference in social media use between the parks and recreation departments and the planning and zoning departments. Parks and recreation managers may view social media as a good tool for engaging the citizens they serve, but planning and zoning managers may not believe social media is a good tool for engaging the

citizens they serve. This may also be were decoupling (Lines, 2005) is occurring in social media adoption. In all of these cases this politics-administration dichotomy is another area of future research. Research should also further examine the idea that a paradox may be causing the differences in social media use among the departments.

### *Practical Implications and Recommendations*

Chapter One explained why it is important for administrators to engage citizens and how adopting social media platforms can be effective tools for citizen engagement. Understandably there are many governments that want to adopt social media based on citizen engagement and social media use research, but none of this research will help if they do not understand how environments impact social media use. Three major findings in this study may help practitioners map the road of social media adoption. The first practical implication is the overall high levels of social media use among all city departments. The second practical implication is the differences in social media use among the departments. The third practical implication is that perceived organization influences and administrator preconceptions are having the most impact on levels of social media adoption. Each of these implications is presented below.

#### First Practical Implication and Recommendation: High Overall Levels of Social Media Use

The first practical implication is the high levels of social media use. The findings of this study show that 49% of city departments are using social media at the collaboration level, 11% are using social media at the participatory level, 22% have adopted only one-way information sharing social media tools at the initial stage, and 18% have no social media adoption. This shows that 60% of the responding managers are using social media for two-way interaction and



altogether 82% are using some form of social media platform. If these numbers are any representation of actual social media use in cities, this would suggest that using social media to engage citizens is no longer an exception but a norm.

One possible reason for this high level of use is that social media is following a natural progression of adoption into public organizations just as e-government was adopted into organizations in the past (Chapter Four, Figure 10). If social media is following the same path as e-government, then it is probable that at some point in the future all cities and their departments will be using social media even if it is only at the initial adoption level. Cities and departments are also likely to eventually move into the higher two-level interactive social media stages. One recommendation is that governments who are not yet using social media begin planning now for their initial move into social media adoption. The same recommendation would apply to governments using social media at the initial adoption level.

Governments should begin adding social media adoption into their strategic plans. They should look at their current stage of social media adoption and assess what they will need to do to move their city to subsequent stages of social media adoption. Strategic initiatives should include policy decisions that need to be made and the necessary resources allocated for these policies. Governments can look to cities and departments that have already adopted social media for advice and best practices. Governments can also turn to colleges and universities for their knowledge on social media adoption in the public sector to assist them with strategic planning sessions. Many higher educational institutions have courses that require a service learning project as part of the course. This is a perfect opportunity for local governments and higher

educational institutions to work together. One final recommendation is that department managers, city administrators, and oversight boards continue to work with public administration researchers in developing industry standards for using social media.

### Second Practical Implication and Recommendation: Department Levels of Social Media Use

Knowing that departments are eventually going to adopt social media leads to the second practical implication and recommendation. The study showed that 81% of public works departments are using social media, 93% of parks and recreation departments are using social media, and 70% of planning and zoning departments are using social media. These are significant difference between the departments, most notably between the parks and recreation departments and the planning and zoning departments (23%). Provided these are actual differences due to department cultures, cities can expect that some departments are going to environments that are more supportive of using social media than others. As governments begin their strategic plans for implementing social media they should take into consideration departments that are going to need more assistance with this transition. Parks and recreation departments could become champions to the other departments by sharing how they prepared to use, adopted, and maintain social media platforms. They would be able to share their best practices and lessons learned.

### Third Practical Implementation and Recommendation: Environmental Influences

The third practical implication and recommendation focuses on perceived organizational influences and administrator preconceptions. The findings of this research suggest that perceptions of the city's administrative culture and administrator's preconceptions of social

media as a tool to engage citizens play key factors in the decision to adopt social media. More specifically, the findings suggest that department managers in centralized organizations are more likely to adopt the social media policies of the organization, and managers in decentralized organizations are more likely not to adopt social media. For the administrator, their own comfort with using social media and trust in the tool's usefulness to engage citizens, perceptions of department resources, along with their own willingness to innovate and willingness to engage citizens in the participation process, play a secondary influence on their decision to adopt social media.

Since managers will most likely be looking to the organization for direction on social media policy, one recommendation for city chief executives and oversight boards is to begin making centralized social media policy if they have not already done so. Upper management will also want to ensure that department managers have the necessary resources and support to use social media tools. For more innovative managers, cities can implement policies that promote innovation. For less innovation managers, or managers uncomfortable with using social media tools, cities could offer training programs on social media tools. Another recommendation is to require department managers to work on short-term projects that use social media tools to engage citizens. Managers could also team with mentors in these short-term projects who are more comfortable with using social media tools to engage citizens.

### Study Limitations

The results of this study might have been affected by several limitations. The first limitation is clearly the low number of responses. The survey was administered via Qualtrics to

783 city department managers in 261 large cities across the United States. The final response rate was 20.1 % or 157 respondents. It is difficult to predict what impact a larger sample size would have on the survey results. For example, perceived political trust and perceived public influences might have shown a greater impact. This could result in a model that is able to predict environments to levels of social media adoption. The limited responses may also be causing response rate bias (Sheehan, 2001). Another study is recommended that includes more departments and small cities and that is administered at another time of year.

The second study limitation concerns the survey instrument. One survey instrument limitation is that respondents are anonymous. Anonymity makes it difficult to determine if department responses are from the same or different cities. There are differences in the levels of social media use among the departments. If they are all coming from the same cities then it would show that department cultures are having an impact on social media use. If they are from different cities then departments from the same cities could be compared to see if it is city or department cultures that are having the impact on social media use. However, it is difficult to know what impact changing this survey from anonymous to confidential would have on the response rate. Concerns over anonymity may already be impacting the number of responses in this study. That number could significantly decrease even further if respondent answers are changed from anonymous to confidential. Future studies will have to weigh the cost and benefits of keeping this survey anonymous.

Another survey instrument limitation is in the questions that were presented. As noted in Chapter Three all questions were taken from previous studies. The independent questions were

taken from studies that look at environment to citizen engagement. Even though the questions were checked by Cronbach's Alpha, it may be that these questions are not the best questions for capturing environment to social media adoption. As noted earlier in this study, there are certainly some question that could be added to the survey instrument. These would arguably make this instrument stronger and help to better connect political and public influences to social media adoption. For example, a question asking if social media policy is set by politicians or senior management needs to be included. There also needs to be a question that addresses budget funding or resources for social media programs. How are resources to pay for social media determined? Are they set specifically in the budget or are the allocated after the fact by senior management? A question that shows if oversight boards are comprised of administrators or politicians would also help to better identify possible political influences. There also needs to be a question about length of social media use. These are questions that perceivably would have strengthened this survey instrument. A review of the survey instrument questions is recommended before it is administered again in the future.

The final study limitation deals with a possible semi-snowball sampling effect. Traditional snowball sampling occurs when existing study subjects recruit future subjects from their friends. In this study managers who did not have time to complete the survey may have forwarded it to other managers (or staff members) to complete. Managers may have also forwarded the survey to a communications or public relations department within their city that is using a social media page. While this is not exactly a snowball effect, it is the best way to explain this limitation. This becomes a threat to the study, because it is seeking to identify the reasons department managers from three specific departments choose to adopt or not adopt social

media for their departments. If this did occur it would have impacted the results. Being able to identify who took the survey would be helpful. In the pre-test, one department manager responded that she had forwarded the survey link to her city's communication and outreach department, noting that this department handled the city's social media web page. As a result of this possible threat, invitees were asked not to forward the study. Even though respondents were asked not to forward the study link to another department or manager, there was no way to control for this. This may have occurred among the responses in this study.

This threatens the study by bringing other departments into the population. This could explain the overwhelmingly higher than expected social media levels. Surveys may have been forwarded to communications or public relations departments that maintain a city's social media page. A question in the survey allowing respondents to add their title would have helped to control for this. Additionally, even if the study was not forwarded there is no way to determine if respondents are referring to their department's social media page or their city's social media page. While there were controls for identifying whether or not a manager is associating a web page as social media, there are no controls for department managers mistaking a city social media page for their department page. Again, a question to identify a city social media page from a department social media page would have helped to control for this.

### Future Research

There are four proposed directions for future research as a result of this study. The first direction is to validate the findings of this study. This would help to guide other future research paths. Due to the fact that this survey was administered to city department managers from three

departments in large cities across the United States, it is difficult to apply these findings to all city department managers. Therefore, the first step is to validate the findings of this study. It is recommended that this survey be administered again by drawing from a larger pool of city department managers. This can be accomplished by adding more city departments and smaller cities into the population. Depending on how large the population size, random selection can be used to generate a sample of participants. The survey instrument needs to be reviewed using the lessons learned in this study and updated with the recommended questions shared in previous sections. The survey should not be administered over the summer or early fall. This appears to be a time of year when many administrators take leave or are working on budgets. If the findings in this study are confirmed then there are three possible directions for future research. The first direction is an examination of the proposed four stages of social research, the second direction is an exploration of social media use beyond the fourth stage, and the third direction is further examination of the rational environment to social media adoption model.

The first possible direction for research is the examination of the four proposed stages of social media adoption. It would be easy to take the results of the re-administered survey above and place social media use in one of the four categories. Since the new survey instrument would include a question about length of survey use, it could then be used to determine if length of use is having an impact on levels of social media adoption. Literature review for this survey should combine the two models presented in Chapter Two (Figures 6 & 7) with the research in this study. It should also look for other factors that are also influencing levels of adoption along with length of use. There are several questions that can be used to guide the start of this research.

What are the internal and external pressures that drive initial social media adoption? Are internal

pressures the only influence on two-way social media adoption? Is decoupling (Lines, 2005) separating participatory social media use from collaborative social media use? Will all cities and departments eventually use social media? Will they all eventually move to collaborative social media use, and if so how long before this happens? These questions can help guide research to further defining these four stages.

This leads to possible research on the collaborative social media adoption stage and looking beyond this stage. Research in this area should begin to look at what kinds of standards are currently or will be adopted for social media use in the public sector. For example, if you look at many college and university websites most of them are standardized. Someone going onto a college or university website knows that they can find degree requirements under academics. How did these websites become so standardized? Is there one vendor that provided this website format or did universities just mimic each other? How does this apply to social media adoption? There is Facebook, and based on the results of this study it is a commonly used social media tool. Is this setting the standard for public social media use? If not, are governments or vendors working to create some level of standardized practices that make social media sites easier to navigate by citizens? These are all questions that offer possible directions of future social media use.

If managers are found to be working within a rational organizational structure, then this would open the door to the third possible area of research. There needs to be a study that further examines how organizational and administrator influences are determining levels of social media adoption. The article by Mergel and Bretschneider (2013) would be a helpful start in such a



study. It would be important to understand how much of an influence a centralized culture has on social media adoption. Is this where decoupling (Lines, 2005) determines the difference between emerging, advanced, and fully collaborative social media implementation? Future research should rank order these internal influences. Does autonomy and decentralization have the primary impact? Do the other internal influences have a secondary impact? Research could also look at how perceived political influences and perceived public influences are coming into the organization. Are politicians having indirect influences through city managers, oversight boards, or citizens? These are the recommended questions for starting research on the rational environment model.

This leads to the final research direction, which is research at multiple levels of government. This would help to identify if there are universal influences on social media adoption, as well as identifying any differences among each of the levels. Although there may not be significant differences between some counties and cities, there would arguably be difference in state and federal levels of government administration. State and federal governments are larger and tend to be more formalized in their structures. These larger and more formalized structures may show completely different influences to social media adoption.

### Chapter Summary

This chapter summarized the findings of this study and discussed its theoretical and practical implications. It also examined the study limitations and offered avenues for future research. The results of this study show that a high percentage of the respondents are already using some level of social media to engage citizens and that perceived organizational and

administrator influences show the strongest influence on their decision to adopt social media. However, due to the low response rate these findings cannot be attributed the general population. Based on the findings in this study, it appears social media adoption may be mimicking the adoption stages of e-government or that managers may be operating in a rational environment. Political and public influences have no direct impact on social media adoption in these rational environments. If the findings in this study are confirmed then there are three possible directions for future research. The first direction is an examination of the proposed four stages of social research, the second direction is an exploration of social media use beyond the fourth stage, and the third direction is a further examination of the rational environment to social media adoption.

## APPENDIX A: IRB APPROVAL LETTER



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: UCF Institutional Review Board #1  
FWA00000351, IRB00001138

To: Daniel J. Seigler

Date: June 19, 2014

Dear Researcher:

On 06/19/2014, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Project Title: Administrative responsiveness and social media: A study of the adoption of social media as a tool to engage citizens in local government functions  
Investigator: Daniel J. Seigler  
IRB Number: SBE-14-10340  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Patria Davis on 06/19/2014 02:59:26 PM EDT

A handwritten signature in black ink, appearing to read "Patria Davis".

IRB Coordinator

## APPENDIX B: EXPLANATION OF RESEARCH



### EXPLANATION OF RESEARCH

**Title of Project:** Administrative responsiveness and social media: A study of the adoption of social media as a tool to engage citizens in local government functions

**Principal Investigator:** Daniel Seigler

**Faculty Supervisor:** Thomas Bryer, Ph.D.

You are being invited to take part in a dissertation research study. Your participation is completely voluntary. Whether you take part is up to you.

- The purpose of this research is to identify the varying levels of social media adoption by public administrations as a tool to engage citizens in public decision making.
- You are being asked to complete a 50 question anonymous survey. Questions will be used to measure your working environment, management style and social media use. Please feel free to leave any questions blank if you do not know the answer or you do not feel comfortable answering that particular question. It should take you approximately 30 minutes to complete this survey.
- Because your answers are anonymous, we are not able to link you to your answers. However, you may be required to publically disclose your answers due to your state or local government's public records disclosure laws. You may request a paper copy of the survey questions to retain for your records.
- By accessing the survey, you are consenting to participate in this research.

**Note:** You must be 18 years of age or older to take part in this research study.

**Study contact for questions about the study or to report a problem:** If you have questions, concerns, or complaints, please contact Daniel Seigler, Ph.D. candidate in the College of Health and Public Affairs at 407-823-2190 or via e-mail at [Daniel.seigler@ucf.edu](mailto:Daniel.seigler@ucf.edu), or Dr. Thomas Bryer, Associate Professor, School of Public Administration at 407-823-0410 or via e-mail at [Thomas.bryer@ucf.edu](mailto:Thomas.bryer@ucf.edu).

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional

Review Board, University of Central Florida, Office of Research & Commercialization, 12201  
Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

## APPENDIX C: SURVEY QUESTIONS TABLE



## Independent Variables and Questions

Construct	Smaller Constructs/Questions	Source
<p style="text-align: center;"><b>Perceived Political Trust (PPT)</b></p>	<p>Items are measured on a five-point Likert scale 1 – strongly disagree to 5 – strongly agree to the following statements about their elected officials:</p> <p><b><u>Elected Official Trust for the Department (EOT):</u></b></p> <ol style="list-style-type: none"> <li>1. Most elected officials trust <i>my department</i> (changed from “the organization”). (2009 &amp; 2011)</li> <li>2. Most elected officials believe that the <i>department</i> (changed from “the agency”) is competent. (2009)</li> <li>3. Most elected officials believe that <i>my department</i> (changed from “the agency”) is effective. (2009 &amp; 2011)</li> </ol>	<p>Yang, K., &amp; Pandey, S. K., (2009). How do perceived political environmental and administrative reform affect employee commitment? <i>Journal of Public Administration Research and Theory</i>. 19: 335-360.</p> <p>Yang, K., &amp; Pandey, S. K., (2011). Further dissecting the black box of citizen participation: When does citizen involvement lead to good outcomes? <i>Public Administration Review</i>. 71(6): 880-892.</p>
	<p><b><u>Budget Flexibility (BF):</u></b></p> <ol style="list-style-type: none"> <li>4. My department is able to shift financial resources within its budget to accomplish its mission.</li> <li>5. My department is able to shift nonfinancial resources within budget to accomplish its mission.</li> </ol>	<p>Yang, K., &amp; Pandey, S. K., (2011). Further dissecting the black box of citizen participation: When does citizen involvement lead to good outcomes? <i>Public Administration Review</i>. 71(6): 880-892.</p>

Construct	Question	Source
<p align="center"><b>Perceived Organizational Culture (POC)</b></p>	<p>Managers will be asked to respond 1 – strongly disagree to 5 – strongly agree to the following statements about working in their city’s government:</p> <p><b><u>Organizational Innovativeness (OI):</u></b></p> <ul style="list-style-type: none"> <li>6. Most employees in this organization are not afraid to take risks.</li> <li>7. Employees in this organization are rewarded for developing innovative solutions to problems.</li> </ul>	<p>Oliveira, G. H. M., &amp; Welch, E. W., (2013). Social media use in local government: Linkage of technology, task, and organizational context. <i>Government Information Quarterly</i>. 30(4):397-405.</p>
<p align="center"><b>Perceived Organizational Culture (POC)</b></p>	<p>Managers will be asked to respond 1 – strongly disagree to 5 – strongly agree to the following statements about working in their city’s government:</p> <p><b><u>Autonomy &amp; Decentralization (AD(a)):</u></b></p> <ul style="list-style-type: none"> <li>8. There is little action taken here until a supervisor approves a decision.</li> <li>9. In general, a person who wants to make his <i>or her</i> (or her has been added) own decisions would be quickly discouraged (removed “ in this agency”) Even small matters have to be referred to someone higher up for answers.</li> </ul> <p><b><u>Autonomy &amp; Decentralization (AD(b)):</u></b></p> <ul style="list-style-type: none"> <li>10. Please assess the extent of hierarchal authority in your city’s government (changed from “organization”): (Please enter a number between 0 and 10, with 0 signifying few layers of authority and 10 signifying many layers of authority).</li> <li>11. If red tape is defined a burdensome administrative rules and procedures that have negative effects on your department’s performance, please assess the level of red tape <i>placed on your department</i> (changed from “in your organization”).</li> </ul>	<p>Yang, K., &amp; Pandey, S. K., (2009). How do perceived political environmental and administrative reform affect employee commitment? <i>Journal of Public Administration Research and Theory</i>. 19: 335-360.</p> <p>Yang, K., &amp; Pandey, S. K., (2011). Further dissecting the black box of citizen participation: When does citizen involvement lead to good outcomes? <i>Public Administration Review</i>. 71(6): 880-892.</p>

Construct	Smaller Constructs/Questions	Source
<p align="center"><b>Perceived Organizational Culture (POC)</b></p>	<p>Managers will be asked to respond 1 – strongly disagree to 5 – strongly agree to the following statements about working in their city’s government:</p> <p><b><u>Organizational Resources (OR):</u></b></p> <p>12. I have (changed from “am given”) the necessary support and assistance to use social media (changed from “mobile commerce services”)</p> <p>13. I have the financial and technological resources required to use social media (changed from “mobile commerce services”)</p> <p>14. I have access to the software, hardware and network services required to use social media (changed from “mobile commerce services”)</p>	<p>Pedersen, P. E., (2005). Adoption of mobile internet services: An exploratory study of mobile commerce early adopters. <i>Journal of Organizational Computing and Electronic Commerce</i>. 15(2): 203-222</p>
<p align="center"><b>Perceived Administrator Preconceptions (PAP)</b></p>	<p>Managers will be asked to respond 1 – strongly disagree to 5 – strongly agree to the following statements about themselves:</p> <p><b><u>Personal Innovativeness (PI):</u></b></p> <p>15. Among my peers, I am usually the first to explore new <i>technology</i> (changed from “information technologies”).</p> <p>16. I like to experiment with new <i>technology</i> (changed from “information technologies”).</p> <p>17. In general, I am hesitant to try out new <i>technology</i> (changed from “information technologies”).</p>	<p>Lu, J., Yao, J. E., &amp; Yu, C., (2005). Personal innovativeness, social influences and adoption of wireless internet services via mobile technology. <i>Journal of Strategic Information Systems</i>. 14: 245 – 268.</p>

Construct	Smaller Constructs/Questions	Source
<p align="center"><b>Perceived Administrator Preconceptions (PAP)</b></p>	<p><b><u>Attitude Toward Use (AU):</u></b></p> <p>18. For this question, managers are asked to select from a range of values on a semantic differential scale as it relates to their attitude toward the use of <i>social media to engage citizens</i> (this was changed from “mobile commerce services”): Extremely Beneficial/ Extremely Harmful</p>	<p>Pedersen, P. E., (2005). Adoption of mobile internet services: An exploratory study of mobile commerce early adopters. <i>Journal of Organizational Computing and Electronic Commerce</i>. 15(2): 203-222.</p>
	<p>Items are measured on a five-point Likert scale 1 – strongly disagree to 5 – strongly agree (modified from 4 point scale).</p> <p><b><u>User Friendliness (UF):</u></b></p> <p>19. I find it easy to use <i>social media</i> (changed from “mobile commerce services”)</p> <p><b><u>External Influence (UI):</u></b></p> <p>20. In my profession, it is advisable to use social media (changed from “mobile commerce services”).</p> <p><b><u>Intrapersonal Influence (II):</u></b></p> <p>21. Almost all my colleagues think using <i>social media</i> (changed from “mobile commerce services”) is a good idea.</p>	<p>Pedersen, P. E., (2005). Adoption of mobile internet services: An exploratory study of mobile commerce early adopters. <i>Journal of Organizational Computing and Electronic Commerce</i>. 15(2): 203-222.</p>

Construct	Smaller Constructs/Questions	Source
<p align="center"><b>Perceived Administrator Preconceptions (PAP)</b></p>	<p>Items are measured on a five-point Likert scale 1 – strongly disagree to 5 – strongly agree (modified from 7 point scale).</p> <p><b><u>Trust in the Participation Process (TPP):</u></b></p> <p>22. Involvement should be controlled so as not to impair our work efficiency.</p> <p><b><u>Administrator’s Willingness to Promote Citizen Participation Activities (WPC):</u></b></p> <p>23. It is the elected officials’ business, not the administrators’ business, to initiate citizen participation programs.</p> <p>24. Citizen participation should be adopted in all governmental areas and functions.</p>	<p>Yang, K., (2006). Trust and citizen involvement decisions: Trust in citizens, trust in institutions, and propensity to trust. <i>Administration and Society</i>. 38(5): 573-595.</p>
<p align="center"><b>Perceived Public Influences (PPI)</b></p>	<p>Items are measured on a five-point Likert scale 1 – strongly disagree to 5 – strongly agree (modified from 3 point scale).</p> <p><b><u>Prior Experience with Citizens (PEC):</u></b></p> <p>Managers will be asked to think about their efforts engaging customer and citizens in the past three years and then tell to what extent they agree with the following</p> <p>25. In those efforts or programs in which you participated, citizens generally were very cooperative.</p> <p>26. In those efforts or programs in which you participated, citizens were committed throughout the duration of the efforts or programs.</p> <p>27. In those efforts or programs in which you participated, your organizational goals were successfully achieved.</p>	<p>Yang, K. (2005). Public administrators’ trust in citizens: A missing link in citizen involvement efforts. <i>Public Administration Review</i>. 65(3): 273-285.</p>

Construct	Smaller Constructs/Questions	Source
<p><b>Perceived Public Influence (PPI)</b></p>	<p>Items are measured on a five-point Likert scale 1 – no influence to 5 – great deal of influence.</p> <p><b><u>Degree of Public/Media Influence (DPI):</u></b></p> <p>28. How much influence does public opinion exert over your <i>department</i> (changed from “agency”)?</p> <p>29. How much influence does media opinion exert over your <i>department</i> (changed from “agency”)?</p> <p>30. How much influence do client groups exert over your <i>department</i> (changed from “agency”)?</p>	<p>Yang, K., &amp; Pandey, S., (2007). Public responsiveness in government organizations: Testing a preliminary model. <i>Performance and Management Review</i>. 31(2): 215-240.</p>
	<p>Items are measured on a five-point Likert scale 1 – strongly disagree to 5 – strongly agree (modified from 7 point scale).</p> <p>Items are measured on a five-point Likert scale 1 – strongly disagree to 5 – strongly agree (modified from 7 point scale).</p> <p><b><u>Participant Competence (PC):</u></b></p> <p>31. Most citizens who participate have the people skills needed to make a valuable contribution.</p> <p>32. Most citizens who participate have the expertise or technical knowledge needed to make a valuable contribution.</p> <p>33. Most citizens who participate have the civic knowledge (how government works) needed to make a valuable contribution.</p>	<p>Yang, K., &amp; Pandey, S. K., (2011). Further dissecting the black box of citizen participation: When does citizen involvement lead to good outcomes? <i>Public Administration Review</i>. 71(6): 880-892.</p>

## Dependent Variable and Questions

Construct	Questions	Source
<p><b>Social Media Use (SMU)</b></p>	<p>Managers will be asked the following Yes or No Question (this is changed from the Bryer and Nelson study – in their study, they coded this by looking for the answer online):</p> <ol style="list-style-type: none"> <li>1. Does <i>your department</i> (changed from “the city”) maintain a social media page? Yes/No               <ol style="list-style-type: none"> <li>a. No scored 0</li> <li>b. Yes moves to next question.</li> </ol> </li> <li>2. If <i>yes</i> (changed from “so”), are the social media tools used only to share information unidirectionally with citizens? Yes/No               <ol style="list-style-type: none"> <li>a. Yes scored 1</li> <li>b. No moves to next question</li> </ol> </li> </ol>	<p>Bryer, T. A., &amp; Nelson, K. L., (2013). Social media for civic engagement: An exploration of urban governments. In C. N. Silva (Ed.), <i>Citizen E-Participation in Urban Governance</i>. PA: IGI Global.</p>
	<p>If no, managers will be asked the following Yes or No Question:</p> <ol style="list-style-type: none"> <li>3. Is social media used to provide input on planning and policy? Yes/No</li> <li>4. Is social media used to enable collaboration and coordination on projects with citizens? Yes/No</li> </ol> <ul style="list-style-type: none"> <li>• No to <u>both</u> questions will be scored with a 2.</li> <li>• Yes to <u>either</u> question will be scored with a 3.</li> </ul>	<p>Oliveira, G. H. M., &amp; Welch, E. W., (2013). Social media use in local government: Linkage of technology, task, and organizational context. <i>Government Information Quarterly</i>. 30(4):397-405.</p>

## Demographic Questions

Construct	Questions	Source
<p align="center"><b>Form of Government (FG)</b></p>	<p><b><u>Tell us about your form of government:</u></b></p> <ol style="list-style-type: none"> <li>1. Our city has a council? Yes/No</li> <li>2. Is your council elected? Yes/No</li> <li>3. Our city has a mayor. Yes/No</li> <li>4. If yes, is your mayor elected? Yes/No</li> <li>5. If no, is your mayor selected by your council? Yes/No</li> <li>6. Does your city have a city manager or chief administrative officer? Yes – City Manager/Yes – Chief Administrative Officer/No</li> <li>7. If yes, how are they hired? Appointed by mayor and approved by council/Appointed by mayor with council consent/Appointed by mayor with no council consent/Appointed by the council only/Other</li> </ol>	<p>Bryer, T. A., &amp; Nelson, K. L., (2013). Social media for civic engagement: An exploration of urban governments. In C. N. Silva (Ed.), <i>Citizen E-Participation in Urban Governance</i>. PA: IGI Global.</p>
<p align="center"><b>Professional Demographics</b></p>	<p><b><u>Tell us about your position and department:</u></b></p> <ol style="list-style-type: none"> <li>8. How many years have you been in your current manager position?</li> <li>9. How many years have you been with the city total?</li> <li>10. What percentage of the city’s budget is allocated to your department?</li> <li>11. Who do you directly report to?</li> </ol>	<p align="center">NA</p>
<p align="center"><b>Personal Demographics</b></p>	<p><b><u>Tell us about yourself:</u></b></p> <ol style="list-style-type: none"> <li>12. What is your age?</li> <li>13. What is your gender?</li> <li>14. What is your income level?</li> <li>15. What is your ethnicity?</li> </ol>	<p align="center">NA</p>



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