

Chapter 33

Information Quality in Participatory Systems: The Case of Abu Dhabi

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ABSTRACT

The study explores the impact of participatory systems on information quality using Abu Dhabi as a case study. Participatory systems are used for deciding social change to affect residents and citizens positively. The case study research method was used to examine information quality in a participatory system. Content of the participatory system was assessed for information quality and it was found to support theoretical claims that Abu Dhabi residents and citizens participate in building sustainable competition using participatory systems. The limitations of the study are found in its focus on a single application, the app CityGuard. Through examining the use of CityGuard, specific issues were recognized which allowed the definition of steps on how its use could impact social change more positively. This paper presents findings from the use of CityGuard as a public participatory tool.

INTRODUCTION

This paper assesses strategies used by the UAE's capital, Abu Dhabi (AD) and the Abu Dhabi Emirate's *Smart Government* initiatives in applying Volunteers Geographic Information (VGI). It examines how the AD government has utilized VGI for evaluating resident participation in services delivery and development. Participation not only influences formation of public policy, but also co-produces public services, a concept first introduced over 30 years ago, (Whitaker, 1980) and further developed within public administration research (Ostrom, 2010).

Information quality in participatory systems is essential due to the various uses of such systems, such as elections which decide the leadership of a country (Lichtman, 2010). Other uses include health-care

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information systems which use a series of data streams for convergence into disparate systems (Esmahi & Badidi, 2010).

Innovation networks which are like participatory tools rely on knowledge flows of information, trust, and technological competence to function (Platonov & Bergman, 2011). In some cases, contributions require motivation before the development of knowledge can take place (Riss, 2011). Artificial Intelligence can be used to support decision making when knowledge-based systems are operational (Anselma et al, 2011). Other tools that support information management can also advance user in interfaces for managing and sharing personal information within Innovation networks which are like participatory tools (Christidis, et al 2011).

LITERATURE REVIEW

Current theories view co-producer engagement in public service as raising expectations for greater efficiencies and satisfactory outcomes, but question the validity and certainty of VGI data. Contemporary research finds that while co-production of public service delivery decreases uncertainty for users, it tends to increase uncertainty for organization, and thus organizational needs for reducing uncertainty may diminish possibilities for user coproduction. (Fledderus, Brandsen, & Honinghegen, 2015).

While co-production differs from e-participation in that it implies stronger public influence on governmental decision-making, the UAE Federal Government has unequivocally called for public empowerment in their smart e-government policies. Abu Dhabi (AD) also invites involvement through a sophisticated panel of interactive web-based applications accessible through both a single e-government portal and through specialized mobile applications. Differences between national governments and municipal or regional governments can clearly raise problems in many places, but much less in the UAE and especially in Abu Dhabi, which act as both city-state and national capital to set many common agendas.

Assessing AD's e-government relations to participation should at least situate it among global rankings and draw some comparisons with global Smart Cities processes, policies and practices of e-governance. Taking an overview of e-governance / Smart Cities research, several research entities have websites that post rankings and discussion of theories and methods used in ranking as "the comparison of cities can support investors in their choice of location and it can be an important guide for the cities to judge their strengths and weaknesses and to define their goals and strategies for future development and better positioning in the urban system" (Giffinger, 2009, p. 703). Researchers in a more recent study found that "different metrics of urban smartness are reviewed to show the need for a shared definition of what constitutes a smart city" (Albino, Bernardi & Dangelico, 2015, p. 3).

From another perspective, "the world-wide urbanisation trend calls for a repositioning of cities using multi-criteria methodology for identifying the relative position of various important cities" (Kourtit, Macharis & Nijkamp, 2014, p.445-446 (2). Such an approach pairs with benchmarking as "an essential prerequisite for informed and strategic vision and policy making since knowledge-based development has become a new urban policy approach for the competitive cities of the global knowledge economy" (Yigitcanlar, 2014, p. 253-270). Overall, advancing uses of ICTs has stimulated a trend as "many cities aspire to create smart, connected and intelligent environments." And while "companies such as IBM, CISCO, Siemens, and Ericsson are offering latest ICT products to cities, technology as a standalone entity cannot flourish without a close cooperation at the macro (country) level" (Akçura, & Avci, 2013).

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