Digital Divide and Citizen Use of E-Government in China’s Municipalities

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ABSTRACT

By using the 2014 randomly sampling survey of 36 major cities in China, the author empirically examines the status and predictors of e-government use by citizens. The author finds that nearly one third of the respondents accessed online services of city government websites, and the sampled cities vary substantially in the percentage of e-government uptake. The results show that e-government use is primarily driven by citizen trust in government, age, education, and income, whereas political efficacy, gender, nationality, household types, and occupations are not significant. There is a notable digital divide in relatively disadvantaged groups, and the government should pay particular attention to boost e-government use among these individuals.

KEYWORDS

China, Citizen Use, Digital Divide, E-Government, Government Website

INTRODUCTION

Public sectors around the world have been spending enormously in information and communication technologies (ICTs) to advance the development of electronic government (e-government) with the aim of streamlining business processes, cutting cost and manpower, increasing efficiency and effectiveness, and retaining citizen trust and legitimacy (UN, 2014; West, 2005). China is also no exception, and its governments at various levels are keen in adopting web portals, social media, and other cutting-edged ICTs (Ma, 2013, 2014; Wu, Ma, & Yang, 2013). The first national census of government websites commissioned by the General Office of the State Council (2016), the central government in China, in 2015 shows that totally 84,094 web portals have been set up, with 66,453 or 79.0 percent regularly operated. Almost all governments at the five administrative tiers (central, provincial, prefecture-, county-, and township levels) have been operating official websites. The sample inspection denotes that 90.8 percent of the monitored government websites are qualified or acceptable (e.g., regularly updated and appropriately maintained), and ministry- and provincial web portals (100 percent) outperforms those at prefecture- and county-level (95 percent) and lower levels (80 percent).

Thanks to its large population and accelerating economic growth, China hosts the largest amount of residents using the Internet. As the survey data from the China Internet Network Information Center (CNNIC, 2016) reveal, 50.3 percent (or 688 million) of the population in China has used the Internet by the end of 2015. The ubiquitous use of smart phone and the increasing coverage of Wi-Fi...
have remarkably boosted the Internet penetration rate over the past few years, with 90.1 percent of
the Internet users regularly accessing online information and services by cell phone (CNNIC, 2016).

With over half of the population living and working in urban area, city governments have been
playing increasingly crucial parts in public service delivery (Ma, 2016). Municipalities across China
have been investing heavily in ICTs to advance online information disclosure, digital public service
delivery, and electronic citizen participation (Schläger, 2013). Almost all municipal governments
have developed official web portals with increasingly sophisticated and customized features (Hua,
Shia, Panc, & Wang, 2012), but we know little about whether and how they are used by their intended
clients, i.e., citizens. Given the remarkable disparities across regions and cohorts in socioeconomic
development, it is not surprising that there is a sizeable gap among potential users of e-government
services (Wang & Chen, 2012). It is thus both theoretically and practically imperative to examine the
use of urban e-government features by citizens, which is the focus of this study.

The survey on citizen use of e-government in China is scarce and limited in selected localities
or groups, convenience sampling and small sample size, and outdated results. In this paper we use
the latest nationwide survey data to examine the extent to which ordinary citizens use online public
services. To our knowledge, it is one of the first surveys to scan the use of e-government by citizens
across China. We empirically analyze the digital divide in e-government usage by focusing on
individual demographics (e.g., gender, age, and nationality), socioeconomic attributes (e.g., income,
education, and occupation) and political attitudes (e.g., trust in government). The multivariate analysis
reveals a huge gap in citizen usage of digital government, and we discuss the reasons and impacts
of the digital divide.

We structure the remainder of the paper as follows. We first review the literature on citizen use
of e-government and develop the hypotheses to be tested in the context of urban China. We then
present the data and methods used in empirical analyses and report the key analytic results. We finally
discuss the theoretical and policy implications of the findings, and conclude with suggestions for
future research.

LITERATURE REVIEW, RESEARCH CONTEXT, AND HYPOTHESES

Literature Review

The adoption, use, and utilization of e-government by citizens have been ubiquitously examined in
the existing literature, and we rely on recent literature reviews (Hofmann, Räckers, & Becker, 2012;
Ryad & Henri, 2008) to identify key variables to elaborate on our hypotheses. The past two decades
have witnessed the burgeoning literature dedicated to the adoption and usage of e-government by
citizens. As revealed by a recent meta-analysis, at least 103 empirical studies on citizen adoption of
e-government have been published (Rana, Dwivedi, & Williams, 2013). While the prior studies help
identify what works in e-government use, they are limited in several aspects.

First, the literature is primarily documented by and adapted from several well-established theories
on the acceptance of technology, reasoned actions or planned behaviors, and innovation adoption
and diffusion (Hofmann et al., 2012). These models have implications for e-government design,
implementation, and development, and we should pay attention to the findings generating from these
models (Rana, Williams, Dwivedi, & Williams, 2012). We should, however, simultaneously pay
attention to other key variables usually controlled in these sophisticated models, e.g., demographical
and socioeconomic factors. The perceptions of and predispositions to e-government functions are by
and large shaped by citizens’ individual characteristics and attributes (Choi & Park, 2013). Despite
these factors cannot be easily manipulated, the findings pertinent to their variations and implications
can help the government and relevant agencies supply more accessible and usable e-government
features to boost the intended users’ actual use (Reddick & Anthopoulos, 2014).
Teaching Digital Citizenship in the Networked Classroom
[www.igi-global.com/article/teaching-digital-citizenship-in-the-networked-classroom/210105?camid=4v1a](www.igi-global.com/article/teaching-digital-citizenship-in-the-networked-classroom/210105?camid=4v1a)