ICT expansion and the digital divide in democratic freedoms: An analysis of the impact of ICT expansion, education and ICT filtering on democracy

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ABSTRACT

In recent years, several case studies have appeared on how mobile telephones, SMS and the Internet had an impact on political activities. It has been widely argued that information and communication technology (ICT) is influencing democracy all over the world. However, few studies provide any analysis of how ICT expansion correlates with measures of democracy. In this paper, we investigate the relationship between the global expansion of ICT and the level of democracy within nations. We analyze archival data on 133 countries from 1995 to 2003, which was the period-of-time of explosive ICT expansion. Some important findings of our study are: (a) there is a growing digital divide in democratic freedoms among countries; (b) in spite of rapid ICT expansion in some countries, Internet filtering is having a significant impact on democratic freedoms.

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1. Introduction

Information and communication technologies (ICTs) are central to information access and participation in social and political life (Bennett and Fielding, 1997; Becker, 2001; Harwit and Clark, 2001; Snellen, 2001; Drezner and Farrell, 2004). These technologies facilitate the rapid accumulation and dissemination of information, group interaction (Norris, 1999), communication and collaboration. They allow citizens to engage in debate on political matters, and become familiar with political opinions and events that affect their communities (Jankowski and van Selm, 2000; La Porte et al., 2001; Oates, 2003). The use of ICT for communication and collaboration is viewed as an opportunity for otherwise disenfranchised citizens to participate in political life and to challenge the dominant order. One well-cited example is that of the Zapatista rebellion in the state of Chiapas, Mexico (Cooper, 1994; La Botz, 1995; Gilbreth and Otero, 2001). This movement consisted mainly of impoverished Mayan citizens who contested the state's political transition towards neo-liberalism. Because the majority of the state's media resources sided with the ruling elite, they refused to reproduce Zapatista material. The Zapatistas needed to find other media through which they could articulate their interest and influence the political process. Through the Internet, they contacted newsgroups, indigenous rights groups, and human rights organizations and quickly made the world aware of their situation. Soon the story of the Zapatista made international headlines and neglected segments of the Mexican population received increasing attention, while the ruling elite came under intense pressure and scrutiny from the international community.

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Dahlgren (2005) argues that the Internet extends and pluralizes the public sphere in a number different ways including structures, representation, and interaction. ICTs not only foster the expression of individual interests, but also enhance public dialogue and collaboration among constituents with divergent interests.

Some even believe that these ICT initiatives are creating a new type of political actor called the "digital citizen" (Katz, 1997). While anecdotal evidence is used to argue that ICT expansion has significantly influenced the expansion of freedom and democracy globally, there are few systematic studies on this issue (Kampen and Snijkers, 2003). The existing literature is mostly comprised of case studies of individual countries or journalistic reports on specific regions of the world. This paper will fill this gap in literature. Our study uses archival data from 133 counties in different stages of ICT expansion. We use 2SLS estimate to investigate three important relationships: (1) ICT expansion and democracy; (2) literacy and ICT expansion; (3) ICT filtering and its impact on the future development of ICTs. This will allow us to analyze the extent to which ICT is influencing democracy worldwide. The rest of the paper is organized as follows: Section 2 presents the theoretical basis of the concepts of freedom and democracy that we are using in our study. Section 3 discusses our research hypotheses and methodology. Section 4 provides analysis of the findings. Finally, Section 5 discusses issues for future research.

2. e-Democracy framework

2.1. Defining democracy

At the most basic level, democracy denotes a form of government in which all constituents are able to participate by standing for election to public office and electing others to represent their interests. This also includes the right to challenge and/or call to account an existing government for actions that violate public trust. In a recent comment on the nature of democracy, the Nobel laureate Amartya Sen asserted that "democracy has complex demands, which certainly include voting and respect for election results, but it also requires the protection of liberties and freedoms, respect for legal entitlements, and the guaranteeing of free discussion and uncensored distribution of news and fair comment" (Sen, 1999). Norris (2001) in regards to the representative democracy points out to three major characteristics: (1) its pluralistic competition among parties and individuals for all positions of government power; (2) its participation feature that allows citizens equal opportunities in the selection of parties and representatives through free, fair and periodic elections; and finally (3) its civil and political liberties to speak, publish, assemble, and organize, as necessary conditions to ensure effective competition and participation. These characteristics focus particularly "upon how representative democracies function through free and fair elections, as the primary mechanism for holding governments accountable for their actions" (p. 7).

Balkin (2004) argues that central to free expression and democracy is access to information. Recent research shows that citizens who have access to ICT are more likely to participate in the political process (Weare, 2002). In this regard, the role of the state in promoting democracy is to foster the freedom of expression and access to information. Theories of political mobilization also assert that open access to information enables citizens to monitor electoral campaigns and government actions (Berry, 1984; Bimber, 2001). However, information also enables governments to identify citizens who participate in the political process, and this can be problematic in societies where democracy is immature or does not exist (Lynch, 2003; Yu, 2004).

2.2. ICT and e-democracy

Numerous studies illustrate the ways in which national and local governmental bodies are employing ICTs to enhance democracy (Dertouzos, 1997; Sussman, 1997; Cigler and Burdett, 1998; Bennett and Fielding, 1997; Bimber, 2001). Mudhai (2003) argues that ICTs have been perceived as a drive to the "third wave" of democratization. Balkin (2004) points out that the digital revolution brings features of freedom of expression to the forefront of our concern and makes possible for widespread cultural participation and interaction. He identifies cultural participation as a means of citizens' participation in the production of culture, and in the development of the ideas and meanings that constitute them and the communities and sub-communities to which they belong. ICTs have enabled citizen participation in the democratic process by providing e-democracy (Clift, 2003; Coleman, 2003; McCullagh, 2003; Morrisett, 2003; Rushkoff, 2003; Norris, 1999, 2001). ICT tools and services such as the Internet and mobile SMS have enabled citizens to not only participate in democratic process, but also mobilization. The wide spread and usage of the Internet in organizing and mobilizing people around the world have helped individuals and groups to debate and influence issues relevant to political life and increase civic and political participation (Suarez, 2006; Weber et al., 2003; Gilbreth and Otero, 2001; Norris, 2001; Bennett and Fielding, 1997; Dertouzos, 1997; Sussman, 1997).

ICT tools and services are widely used as a source of information and mobilization in political life. For example, authorities in Thailand sent SMS messages to over 25 mobile cell phone users encouraging them to participate in election (Thai election, 2006) or in the recent US presidential election about 24% of Americans regularly learned about the presidential campaign from the Internet (The Pew, 2008). These tools and services were also widely used as a means of mobilizing people in political discourses or monitoring the election outcomes. Suarez (2006) points out that SMS had a crucial role for mobilizing people for mass demonstration against government demanding for the truth in 2004's Madrid terrorist attack. It had also a