

The Effect of Freedom of Expression and Access to Information on the Relationship between ICTs and the Well-being of Nations

Emergent Research Forum (ERF) Papers

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Introduction

The Information Systems (IS) discipline has struggled, almost since its inception, to determine what type of research questions are appropriate to our field (Weber 2003). Of late, senior scholars have made a call for IS research venturing beyond our usual scope of investigating enterprise technologies in corporations (Majchrzak et al 2016). While theory is essential to the success of our scientific discipline in the long term (Van de Ven 1989), narrow definitions of what constitute theory can undermine novel, meaningful research (Majchrzak et al 2016). Much IS research has focused on theory addressing specific business problems and relating those to Information Communication Technologies (ICTs) use. Results explain how why, and/or under what conditions that ICT resolves the problem (Majchrzak et al 2016). This research has importance, but in the age of ubiquitous computing, with ICTs integrated into almost every aspect of life (Carter and Grover 2015), our discipline's boundaries must expand. The traditional view of ICTs as tools employed primarily by organizations to achieve business goals has progressively less relevance in our digital world where ICTs have been found to benefit health (Richardson et al. 2015), enculturation (Andrade and Doolin 2016), access to education (Cristia et al. 2012), and access to government services (Grimsley and Meehan 2007). There is a need for IS scholars to consider the effects of ICTs not just on organizations but on humans and our societies, complete with a responsibility to generate public policy recommendations and proposals for constructive regulations at all levels. (Majchrzak et al 2016).

Studies showing a positive relationship between high levels of ICT was and national productivity (Dedrick et al. 2011; Dewan and Kraemer 2000; Pohjola 2001; Schreyer 2000). The relationship between ICTs and GDP is well suited to a historical framework that views ICTs primarily through the lens of their role in business. Yet, ICTs affect many aspects of a nation. ICTs improve health outcomes (Venkatesh and Sykes 2013, Venkatesh et al. 2016), social inclusion for women (Oreglia and Srinivasan 2016), and national well-being (Ganju et al. 2016). However, just as the results of ICT implementation in an organization differ based on that organization's culture, norms, and regulations (DeSanctis and Poole 1994, Orlikowski et al 1995), so, too, do nations differ in their norms and laws regarding freedom of expression and information in ways that can affect how ICTs are perceived and used (United Nations Development Program 2016). It is the objective of this study, to resolve the question of how a country's laws and norms regarding freedom of expression and access to information moderate the effect of level of ICT use on national well-being.

Cultural Construction of Acceptable Speech

The conception of acceptable communication at a national level is applied to ICTs in two broad ways (Dutton 2013). First is access to information: how much and what kind of information are citizens permitted to freely view. Second is freedom of expression: the extent and type of speech citizens are permitted to exercise without censure. These two types of policies form the two sides of the coin of speech.

Prior research validates the effect of ICTs on national well-being, but IS literature has not examined what influence, if any, differing approaches to communication norms at the national level may have on the relationship. Researchers and policy makers agree that such differences in norms exist and that determining which norms most effectively produce desirable outcomes represents a complex but important problem for our time (Dutton et al. 2013). However, norms related to appropriate speech are

often intertwined with other issues of culture and governance (Dutton et al 2013, Yates and Orlikowski 1992) making empirical measures of “best practice” difficult to identify or implement. There exists an opportunity to gain insight into this larger issue by studying the moderating effect of such norms and regulations on the relationship between levels of ICT use and national well-being. The ecosystem of communication within a country can be circumscribed by a few sweeping legal conventions, such as that of the first amendment to the US constitution. Or, a nation’s communication ecosystem can be constrained by many incremental boundaries some official, some cultural, and some mechanical (as with the Great Firewall of China) (Dutton 2013).

In the United States, we have enshrined free speech as an unequivocal good. Culturally we view both free speech and unfettered access to information as a beneficial force in society (Dutton 2013). After the rise of ICTs changed the landscape of national and global communication, the US government clarified that the rights of US citizens “include the right to speak out, to dissent, and to offer or receive information across national borders” such speech is protected whether expressed through traditional means of communication or using ICTs (Clark et al. 2013). This perspective aligns with that of many Western nations, which believe freedom of speech and access to information lead to positive outcomes such as stronger democratic institutions, improved innovation due to information diffusion, national economic growth, and social benefit in the form of improved equality and increased social capital (Dutton 2013). However, this perspective is not the only point of view on norms of speech. In contrast to ecosystems with high levels of permissiveness, there are nations that tightly control who has access to information and what speech is acceptable. National governments in many regions of the world exert control over journalists and their publications with the intention of limiting dissent. Many nations also have legal or social taboos around speech or access to certain materials, such as laws in Germany prohibiting hate speech or in the Middle East against the dissemination of pornography (Dutton 2013).

It would be culturally biased and discriminatory to assume, without empirical evidence, that the Western perspective on communication espoused by the United States necessarily creates greater well-being among our national citizenry. In fact, responses to the coverage of the 2016 US presidential election and its aftermath raise questions as to the wholesomeness of such an approach to free speech. National norms supporting unfettered press access, amplified by the twenty-four-hour new cycle, have been blamed for a host of adverse effects on American citizens’ psychological health, social ties, and sense of well-being. (American Psychological Association 2016). While this is a single example from a specific moment in time, it serves to demonstrate a larger point: permissiveness in speech and access to information may come at a cost to a nations’ citizens. In this study, I will test opposed models of freedom of expression and information to determine which benefits national well-being. Testing incompatible models has been held up as a type of research design superior to the more common null hypothesis test (Platt 1964). Since the two perspectives are opposed, permissiveness being the opposite of restriction, support for one will amount to a refutation of the other and allow a greater contribution than testing either alone.

Effects of Speech Restrictions

ICTs have been found to affect national well-being in several concrete ways: via health improvements by allowing disadvantaged communities to access health information, improving access to education to communities with no local source, and by changing the mechanisms of commerce in ways that reduce arbitrage and provide more direct control to producers (Ganju et al. 2016). One would reasonably expect the production of benefits to be moderated by the level of restrictions placed on ICT use within a nation.

However, there is one relationship related to speech norms that may have a direct, rather than moderating, affect national well-being. That is: citizens may experience a reduced sense of well-being simply because restrictions on their behavior exist at all (Yang and Liu 2014). If humans have an innate or socially constructed desire to be “more free” rather than “less free,” then we would expect the relationship between restricted speech and well-being to be a direct negative effect. Given the stigma placed on nations that restrict speech and access to information in the international community (Dutton 2013), such resentment of this curtailment may well exist.

Hypotheses

- H1: The level of ICT use by a nation will have a direct positive relationship to national well-being.
- H2a: Freedom of speech and access to information will positively moderate the relationship between level of ICT use and national well-being.
- H2b: Freedom of speech and access to information will negatively moderate the relationship between level of ICT use and national well-being.
- H3. Restrictions to freedom of speech and access to information will have a direct negative effect on national well-being.

Methods

Sample

To achieve this study's aims, a longitudinal data set comprised of many nations must be compiled. In the past, no such large systematic survey on the national well-being existed; in those instances where well-being items had been included in nation-level data collection efforts, the measures were imprecise, poorly validated, or inconsistent (Diener and Seligman 2004). It is this researcher's good fortune that Gallup Inc. and Healthways Inc. began, in 2006, to include such items in their World Poll. The Gallup World Poll (GWP) data set has been used in a variety of studies across disciplines (Deaton 2008; Diener et al. 2010; Gallup, Inc. and Healthways, Inc. 2014; Ganju et al. 2016). The GWP data consists of survey data from more than 160 countries. They administer approximately 150,000 surveys per year using phone and face-to-face interviews with adults age 15 and older. The populations to which this sample is expected to generalize represents 95% of the global population of adults (Gallup, Inc. and Healthways, Inc. 2014).

Measures

Well-being

National well-being will be collected from the GWP, which includes ten well-being items that align to five well-being facets: purpose, social, financial, community, and physical. This scale is in keeping with the format and conceptual grounding of the Cantril scale (Cantril, H. 1965; Ganju et al. 2016.) The content is qualitatively identical to the World Values Survey measure of happiness, differing only in non-substantive alterations of diction (Helliwell 2012). World Values Survey measure is administered every year and is "the largest non-commercial, cross-national, time series investigation of human beliefs and values ever executed" (World Values Survey 2016). However, the GWP is administered to all nations within the sample annually rather than on a rotating basis.

ICT use

ICT use will be measured using the World Bank Database. As in Ganju et al. 2016, I will look at (1) fixed telephone lines, (2) Internet users, and (3) mobile phones (per 100 people).

Freedom of Expression and Access to Information

In the main model of this study, freedom of expression and access to information will be measured using the Human Freedom Index (HFI), a dataset containing information on 159 countries over the years 2008-2012. This measure operationalizes freedom of expression and access to information with five items: laws and regulations that influence media content, political pressures and controls on media content, press killings, freedom of access to foreign information, and state control over Internet access. This data set has been used in both policy development and economic research. (Vasquez and Porcnik 2016.)

Additionally, two alternate measures for freedom of expression and access to information will be used as robustness checks: a freedom of the press measure from the GWP and the Freedom on the Net report. Assembled by Freedom House, an organization devoted to the analysis of global online freedom, the annual Freedom on the Net report covers the time frame of 2011-2015 and measures internet filtering and censorship in 65 countries (Freedom House 2016).

Control Variables

In addition to these variables of interest, I will use control variables based on the recommendations of Helliwell (2012) and Ganju et al. (2016) in order to reduce bias from factors that correlate with ICT and well-being. The control variables employed are GDP per capita, education, health, importance of religion, air and water quality, and job satisfaction.

Analysis

Fixed Effects Model

This section outlines the econometric techniques that I will use to test the proposed hypotheses. Overall, it is my intention to use a fixed effects method to test these hypotheses, since this method will allow me to eliminate time-invariant country-specific characteristics that are not variables of interest. This follows the protocol employed by Ganju et al. (2016), which found significant correlations.

$$Y_{it} = \beta_1 X_{it1} + \beta_2 X_{it2} + \beta_3 (X_{it1} * X_{it2}) + \alpha_1 + \alpha_2 + \dots + \alpha_n + \gamma_1 + \gamma_2 + \dots + \gamma_t + \varepsilon_{it}$$

In the above model, Y_{it} represents the well-being of country (i) in year (t). X_{it1} represents the level of ICT use in country (i) in year (t) on national well-being. X_{it2} represents the direct effect of the level of restriction of communication in country (i) in year (t) on national well-being. The interaction term $X_{it1} * X_{it2}$ represents the moderating effect of restriction of communication in country (i) in year (t) on the relationship between level of ICT use and national well-being. Other variables, α_1 - α_n represent time-invariant country characteristics and γ_1 - γ_t account for the effects of unobservable factors differing in time but not among nations. For clarity, control variables have been omitted from this equation.

Conclusion and Contributions

Previous research has found that ICTs affect the productivity and well-being of nations. The goal of this study is to determine whether the norms and laws of a nation regarding freedom of speech and access to information affect that benefit. This study is of importance, because it tests an assumption strongly held in many Western cultures. Freedom of speech and of access to information are often presented as a self-evident good needing no further validation. However, as scientists, we must be willing to subject even the most cherished beliefs to rigorous verification. Thus, it is my intention to add empirical evidence to the international conversation on the benefits or dangers of free speech and access to information.

A high-level of national well-being is desirable for any nation regardless of creed, culture, or form of government. If freedom of expression and information access moderates the relationship between ICT and well-being, then finding that conclusively is necessary. The results of this study should empower national and regional policy makers to make informed decisions on the creation of laws and regulations regarding freedom of speech and access to information allowing them to facilitate national well-being. Additionally, global policy makers, who fund the creation of many ICT-enabled interventions, can use empirical findings encourage the design of grants and incentives that support the type of speech and access most beneficial to nations.

REFERENCES

- American Psychological Association. 2016. "APA Survey reveals 2016 presidential election source of significant stress for more than half of Americans."
- Andrade, A. D. and Doolin, B. 2016. "Information and communication technology and the social inclusion of refugees," *MIS Quarterly* (40:2), pp. 405-416.
- Cantril, H. 1965. *Pattern of human concerns*, (1st ed.) Rutgers Univ. Press: New Brunswick, New Jersey.
- Carter, M. and Grover, V. 2015. "Me, My Self, and I(T): Conceptualizing Information Technology Identity and Its Implications," *MIS Quarterly* (39:4), pp. 931-957.
- Cristia, J., Ibararán, P., Cueto, S., Santiago, A., and Severín, E. 2012. *Technology and child development: Evidence from the one laptop per child program*.
- Clarke R. A., Morell M, J., Stone G. R., Sunstein C. R., and Swire P. 2013. *Liberty and Security in a Changing World*.

- Deaton, A. 2008. "Income, Health, and Well-Being Around the World: Evidence from the Gallup World Poll," *The Journal of Economic Perspectives* (22:2), pp. 53-72.
- Dedrick, J., Kraemer, K. L., and Shih, E. 2011. "IT in Developed and Developing Countries," Personal Computing Industry Center, University of California, Irvine.
- DeSanctis, G., and Poole, M. S. 1994. "Capturing the complexity in advanced technology use: Adaptive structuration theory," *Organization Science*, (5:2), pp. 121-147.
- Dewan, S., and Kraemer, K. L. 2000. "Information Technology and Productivity: Evidence from Country-Level Data," *Management Science* (46:4), pp. 548-562.
- Diener, E., and Seligman, M. E. 2004. "Beyond money toward an economy of well-being," *Psychological science in the public interest*, (5:1), pp. 1-31.
- Diener, E., Ng, W., Harter, J., and Arora, R. 2010. "Wealth and Happiness Across the World: Material Prosperity Predicts Life Evaluation, Whereas Psychosocial Prosperity Predicts Positive Feeling," *Journal of Personality and Social Psychology* (99:1), pp. 52-61.
- Dutton, W. H., Dopatka, A., Law, G., and Nash, V. 2013. *Freedom of connection, freedom of expression: the changing legal and regulatory ecology shaping the Internet*. Paris, UNESCO.
- Freedom House. 2016. *Freedom on the Net*. (<https://freedomhouse.org/report/freedom-net/freedom-net-2015>)
- Gallup, Inc. and Healthways, Inc. 2014. *State of Global Well-being: 2014 Country Well-Being Rankings*.
- Ganju, K. K., Pavlou, P. A., and Banker, R. D. 2015. "Does Information and Communication Technology Lead to the Well-Being of Nations? A Country-Level Empirical Investigation." *MIS Quarterly*, (40:2) pp. 417-430.
- Grimsley, M. and Meehan, A. 2007. "e-Government information systems: Evaluation-led design for public value and client trust," *European Journal of Information Systems* (16:2), pp. 134-148.
- Helliwell, J. F., Layard, R., and Sachs, J. 2013. *World happiness report [2012]*.
- Majchrzak, A., Markus, M. L., and Wareham, J. 2016. "Designing for Digital Transformation: Lessons for Information Systems Research from the Study of ICT and Societal Challenges," *MIS Quarterly*, (40:2), pp. 267-277.
- Oreglia, E. and Srinivasan, J. 2016. "ICT, Intermediaries, and the Transformation of Gendered Power Structures," *MIS Quarterly*, (40:2), pp. 501-510.
- Orlikowski, W. J., Yates, J., Okamura, K., and Fujimoto, M. 1995. "Shaping electronic communication: the metastructuring of technology in the context of use," *Organization Science*, (6:4), pp.423-444.
- Platt, J. R. 1964. "Strong inference," *Science*, (146:3642), pp. 347-353.
- Pohjola, M. 2001. "Information Technology and Economic Growth: A Cross-Country Analysis," in *Information Technology and Economic Development*, M. Pohjola (ed.), Oxford, UK: Oxford University Press.
- Richardson, S., Kettinger, W. J., Banks, M. S., and Quintana, Y. 2014. "IT and Agility in the Social Enterprise: A Case Study of St Jude Children's Research Hospital's "Cure4Kids" IT-Platform for International Outreach," *Journal of the Association for Information Systems* (15:1), pp. 1.
- United Nations Development Program. 2016. *Looking Forward: People, planet, and prosperity*. (<http://50.undp.org/en/#future>)
- Van de Ven, A. H. 1989. "Nothing Is Quite so Practical as a Good Theory," *Academy of Management Review* (14:4), pp.486-489.
- Venkatesh, V., and Sykes, T. A. 2013. "Digital Divide Initiative Success in Developing Countries: A Longitudinal Field Study in a Village in India," *Information Systems Research* (24:2), pp. 239-260.
- Venkatesh, V., Rai, A., Sykes, T. A., and Aljafari, R. 2016. "Combating Infant Mortality in Rural India: Evidence from a Field Study of eHealth Kiosk Implementations," *MIS Quarterly* (40:2), pp. 353-380.
- Vasquez, I and Porcnik, T. 2016. *The Human Freedom Index 2016: A Global Measurement of Personal, Civil, and Economic Freedom*. Cato Institute, Fraser Institute, and the Friedrich Naumann Foundation for Freedom. Washington DC.
- Weber, R. 2003. "Still desperately seeking the IT artifact." *MIS quarterly*, (27:2), pp.183-183.
- World Values Survey. 2016 (<http://www.worldvaluessurvey.org/WVSContents.jsp>)
- Yang, Q. and Liu, Y. 2014. "What's on the other side of the great firewall? Chinese Web users' motivations for bypassing the Internet censorship," *Computers in human behavior*, (37), pp. 249-257.
- Yates, J., and Orlikowski, W. J. 1992. "Genres of organizational communication: A structural approach to studying communication and media," *Academy of management review*, (17:2), pp. 299-326.