

---

## Editorial

---

### Shu-Fen Tseng

Graduate School of Social Informatics,  
Yuan Ze University,  
135 Yuan-Tung Road,  
Chung-Li 320, Taiwan  
Fax: +886-3-463-8884  
E-mail: gssftseng@saturn.yzu.edu.tw

**Biographical notes:** Dr. Shu-Fen Tseng is an Associate Professor in the Graduate School of Social Informatics, Yuan Ze University (Taiwan). She received a PhD in Sociology (1996) from the University of Illinois at Chicago. Her research interests are social informatics, digital divide and internet study. She was appointed as a committee member of the E-Society Plan 2010, The Research, Development, Evaluation Commission and Executive Yuan, in 2002.

---

## 1 Introduction

Digital Divide, the term used by the US National Telecommunications and Information Administration (NTIA), refers to the large differences in Information Technology (IT) access by low-income groups, minorities, women and the elderly, and among other groups in society. Since 1995, the term has been widely interpreted to cover a variety of gaps in US society, as well as differences between Western countries and the rest of the world.

The impact of IT on human society is undoubtedly broad and deep. It not only reshapes industrial landscape and legal framework but also brings forth a huge gap between the have and have-not. This gap could be both a gap in socio-economic status among different groups and difference in socio-economic development of the same group at different time spots. It also becomes a pressing issue for those concerned about development of the developing world as how to mitigate the digital divide, the former imposes, on the one hand, and how to expand the digital opportunity, the latter implies.

Despite the dramatic growth of internet connectivity, IT disparities within a nation and between countries have existed. Strategic responses to the digital divide by national, state and local programmes often focus on getting more equipment and connections, more recent research have demonstrated the insufficiency to bridge the divide by only responding to physical access need. Besides physical access of computer and internet, human resources such as individual's literacy as well as digital and social resources to make use of those technologies to engage in meaningful social practices are also important to shed the light of digital opportunity. An access that goes beyond physical connectivity and makes it possible for people to use technology effectively to improve their lives is vital to close digital and social divides.

Although a great deal of documents, papers and books address the issue of digital divide, new insights of conceptual definition of digital divide is urged as well as generating solid empirical studies. The following but not limited issues raise theoretical concerns and deserve further exploration:

- 1 re-thinking the definition of digital divide and its conceptual framework
- 2 what structural, institutional, and individual levels of determinant factors explain variations within and across borders and
- 3 strategic planning of bridging digital divide by effectively integrating cultural sensitive ICTs to meet social development challenges.

After a decade of studying this issue, we are currently at a critical moment for rethinking the digital divide and for adopting new courses of action for integrating ITs into social development both within and across nations. This issue intends to bring the concerns upfront and tries to broaden the scope of digital divide.

In this Special Issue, contributors are encouraged to move beyond the common definitions of physical access, and to focus attention on social processes and behaviour once access had been achieved. The essays in this issue go beyond the common conception, the digital divide is not to limit the gap between technological have and have-not, the economic, political and developmental elements of divide are taken into account to elaborate the new scopes of digital divide. Public management and policies on bridging the digital divide within and between countries are also discussed in this volume.

The first two papers use international data to explore the relationship between ICT and economic and related structural factors. The first paper employs cross-sectional and time series data to test the synergistic effect of ICT on GDP per capita. In this study, Rasiah finds GDP growth precedes growth in ICT. Secondly, the relationship between GDP per capita and ICT is positive and strong; and finally, the impact of ICT on GDP per capita rises over time. The author declares a need for economies to invest more on ICTs to enhance the synergistic effects. In the second paper, Ho and Tseng make similar international comparisons using digital Gini coefficient to summarise their findings. They report a dual development across regions is found in an overtime comparison. The density of digital access relies heavily on a nation's developmental level, social equality and links to the global economy are also important factors to improve digital density.

The third and fourth papers explore e-politic divides, but in different levels. Shelley, Thrane and Shulman compare six blocks of variables over 478 random samples from three states in the USA. They conclude cyber technology magnifies existing social inequalities, as minorities and the less educated stand on the periphery. Those who have IT skill maintain greater access to political machinery than do their IT illiterate counterparts. Furthermore, as citizens engage in online economic and social interests, they are inclined towards e-political participation. In the fourth paper, Chen, Tseng and Huang compare internal interactivity and external online services across different levels of governmental agency in Taiwan to reveal the digital disparities in governmental hierarchy.

Barroso and Gonzalez argue that access and usage are two factors that need adequate consideration in public programme focusing on fighting against the digital divides. The authors analyse the public policy challenges of digital divide by the level of development of different countries and urge three different strategies to be established for bridging the

divides. The final paper turns to a new media, mobile phone, to examine its effects of usage on aggravating the divide of interpersonal relationship. Wu, Chan, Chen and Ishii, employ the dual availability model and explore its influences on media use and interpersonal relationship. The authors suggest mobile phone represents a digital opportunity for users to improve their social relationship.