

Chapter 17

Digital Divide and Economic Wealth: Evidence from Asia–Pacific Countries

Shampa Paul

Institute of Economic Growth, New Delhi, India

ABSTRACT

This chapter aims at identifying and analyzing the factors that have resulted in a digital divide in Asia-Pacific countries. There are several factors that can be used as proxy of the digital divide. In this study, Internet density has been used as a proxy of the digital divide along with other variables such as gross domestic product, computer density, telephone density, & information and communication technology expenditure. Using data from 1995 to 2007 for 10 countries, the study finds evidence of the pivotal role played by communication infrastructure in the diffusion of ICTs, and there is also a high correlation between Internet usage and telephone density. It appears that GDP has been a major factor influencing varying degrees of the diffusion of ICTs and the consequent digital divide.

INTRODUCTION

The traditional societies are realising the relevance of knowledge in everyday life, and due to which are getting converted into knowledge driven societies. Therefore, knowledge–driven societies are giving rise to knowledge–driven economies. This is a global phenomenon, hence nations that have less access to knowledge are less privileged whereas

nations with better access to knowledge become privileged and advanced. It is now the aim of all the nations whether rich or poor, to minimise or bridge the digital divide by introducing information and communication technologies (ICTs) in different activities. Libraries and public institutions are playing a major role in this initiative.

The importance of ICTs as powerful tool for socio-economic development is being widely acknowledged not only by large countries but also

DOI: 10.4018/978-1-61520-767-1.ch017

by small ones as well. However, existing gaps in ICT skills both in developed and developing countries are to be addressed so that ICT is effectively used as engine of economic development. Globally, the Internet has wide spread use as ICT tool. It provides a powerful means of accessing information. According to Grace et al., 2004, in developing countries the Internet offers a cheap and versatile mechanism of connecting users with a global repository of information. The social significance of Internet in broadening and enhancing access to information worldwide has been recognized. It offers promise in delivery of basic services like education and health information to far reaching regions.

The diffusion of Internet though rapid has been highly asymmetrical among different countries. The advanced societies in the world have witnessed the fastest penetration of ICTs. The term 'Digital Divide' is used to describe the divide or gap of digital information between individuals, institutions and countries owing to different socio-economic levels in terms of opportunities available to access ICTs and the Internet. The diffusion and production of ICTs that has led to the digital divide are unevenly distributed among the nations (Mansell and When, 1998).

Although Chowdhury, 2004 argues that improved access to ICT and Internet are not the only factors for reducing the digital divide. But one should not forget that the availability of proper ICT tools is necessary to overcome the gap. It is necessary to look at some of the following factors which separately or in combination help to minimize this divide.

1. Economics: much of the information is only available from the Internet and so it is the libraries, archives and other public institutions to come forward to increase accessibility.
2. Information: with good technology and adequate authorized access, it is easy to find the required information for a particular task.

3. Technology: the information we are talking about is computer maintained and computer accessed, in particular it is accessed across the Internet and through the World Wide Web. If a person or organization does not have a computer, network access, reliable access, high speed access, then finding and using this information ranges from impossible to difficult.
4. Tools: proper access tools like protocols, formats, standards are necessary so as to make the operation of bridging the gap becomes easy.

Thus, phrase 'digital divide' refers to the unequal and disproportionate pace of development in societies in having access to digital infrastructure and services. The revolutionary changes in computer and telecommunication networks along with the global explosion in knowledge have created unprecedented changes in the flow of trade, finance, information, knowledge and its management in and among nations, which has undoubtedly affected the information science area. Key variables such as grant, skilled manpower, infrastructure, quality software etc, are important, as they are likely to have a differential impact on the consequences of accessing information and knowledge (Paul, 2002).

As is well known, per capita income between the rich and poor countries is widely divergent. Although there is little clear-cut association of ICTs and income levels, studies in United States show that ICT adoption leads to equality among social classes and races (DiMaggio et. al., 2001). Asian countries have generally experienced a lower rate of ICT adoption in comparison to non-Asian countries. The ICT diffusion in these countries is low relative to their level of potential as predicted on the basis of their current level of GDP per capita (Lal & Paul, 2004).

Bridges.org (2002) provides the statistics for regional distribution of Internet users, showing the penetration of Internet in Asia-Pacific countries at

8 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/digital-divide-economic-wealth/42750

Related Content

Hierarchical Correlation of Multi-Scale Spatial Pyramid for Similar Mammogram Retrieval

Jinn-Ming Chang, Pai-Jung Huang, Chih-Ying Gwo, Yue Liand Chia-Hung Wei (2011). *International Journal of Digital Library Systems* (pp. 13-23).

www.irma-international.org/article/hierarchical-correlation-multi-scale-spatial/63647

A Content-Driven System Architecture for Tackling Automatic Cataloging of Animated Movie Databases

Bogdan Ionescu, Alexandru Marin, Patrick Lambert, Didier Coquinand Constantin Vertan (2010). *International Journal of Digital Library Systems* (pp. 1-23).

www.irma-international.org/article/content-driven-system-architecture-tackling/42969

Impact of Academic Libraries on Career Development: An Evaluative Study

K. Sakkaravarthiand M. Aravinthan (2020). *Challenges and Opportunities of Open Educational Resources Management* (pp. 63-80).

www.irma-international.org/chapter/impact-of-academic-libraries-on-career-development/258128

Implementation of Next Generation Digital Libraries

Ee-Peng Limand San-Yih Hwang (2005). *Design and Usability of Digital Libraries: Case Studies in the Asia Pacific* (pp. 97-110).

www.irma-international.org/chapter/implementation-next-generation-digital-libraries/8134

RFID Utilization in Public University Libraries in Jordan

Emad Abu-Shanaband Emad Yamin (2014). *International Journal of Digital Library Systems* (pp. 29-43).

www.irma-international.org/article/rfid-utilization-in-public-university-libraries-in-jordan/141373