

## Chapter 7.17

# Do Insecure Systems Increase Global Digital Divide?

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### ABSTRACT

This chapter surveys the issues concerning the digital divide facing developing nations. The authors assert that “insecurity” and the “digital divide” are highly dependent on each other and as insecurity increases so does the digital divide. Therefore, the authors propose to extend the concept of the digital divide to include information security features by putting forward a new model or paradigm of security that is multi-faceted and is able to assist in bridging the digital divide gap. They argue that a lack of attention to security reduces the access to and use of resources with which to attack the digital divide. In particular, for e-business, the authors conclude that in developing

countries having security issues at the forefront would encourage engagement with e-initiatives, or restrain it if there is an absence of security.

### INTRODUCTION

Without doubt information and communication technologies (ICTs) continue to change the world to varying degrees from one place to another, depending on a number of technological and socio-economical factors such as: physical access to technology, education, geographical locations, language and gender (Warschauer, 2002; Chen & Wellman, 2003; Nahon, 2006). As a result of these factors the rates of adopting ICTs are different between countries. Accordingly, this creates a

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disparity between communities, or a gap commonly known as Global Digital Divide.

The term digital divide is claimed to have been first used a decade ago by US Department of Commerce's National Telecommunication and Information Administration (NITA, 1999). Since then, the term has been extensively discussed by scholars and politicians in order to propose strategies and recommendation for bridging the digital gap and helping nations to fully benefit from ICT diffusion.

Different types of inequalities which contribute to increasing the digital divide have been discussed in the literature (van Dijk, 2006). However, we believe that information and communication systems security aspects, which in our opinion can no longer be add-on features, are often overlooked. Moreover, they come as an afterthought when researchers and politicians talk about ICT adoption, and the issues of global digital divide. In this chapter, we argue that a new type of inequality is emerging because many companies are increasingly off shoring and outsourcing part of their businesses to many developing nations resulting in an increasing number of e-business transactions, which are conducted across the borders. Hence, inequality is related to aspects of information security that are rarely addressed in the digital divide literature. We assert, therefore, that a lack of security can negatively affect national initiatives and strategies that are attempting to bridge the digital gap. Consequently, this absence of security would increase the chance that a country stays longer on the wrong side of the global digital divide.

## **EXPLORING THE DIGITAL DIVIDE IN DEVELOPING NATIONS**

In order to bridge the digital divide gap and exploit the claimed benefits of ICT, many developing nations have started a number of ICT projects that are usually referred to as e-initiatives. For instance,

PC@ every home, e-Health and e-Government are some examples of e-initiatives in Jordan (MoICT, 2006). Other Arab states have launched e-initiatives to bridge the gap, create technology awareness and emphasise the importance of personal computer penetration for their people (Soumitra, 2003).

According to Samer (2008), the problem with many of these countries is the lack of strong ICT foundation which leads them to follow short term plans and ad-hoc approaches, which are not based on a well defined and long term comprehensive ICT strategy. As a result, these initiatives provide relatively small achievements compared to their initial intended goals. In addition, there is a clear lack of awareness of ICT security issues in these countries' ICT strategies.

Introducing ICT in developing nations means that governmental, financial and personal information is being processed, stored and exchanged over ICT networks. Moreover, the governments of these nations have the obligation and/or the responsibility to provide their people with all the essentials of education, awareness, technology and legislations required for secure ICT environment.

Unfortunately, many studies reveal that ICT security is becoming an even lower priority and in some cases ignored completely (Tanburn et al., 2001; Bakari, et al., 2005). We argue in the next section that the reason behind this is a lack of focus on ICT security in the digital divide literature and therefore making ICT strategies for bridging the digital gap security-unconscious. As a result leading to a new unanticipated aspect of the global digital divide, and moreover, this absence of security further increases the global digital divide.

Many studies have explored the digital divide from different perspectives. In the nineties, the traditional focus was mainly on infrastructural access (Nahon, 2006). Accordingly, the term "digital divide" has been defined as the inability of citizens to have equal access to online services, either because they do not have the technical means, or

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