



Chapter I

Structural Influences on Global E-Commerce Activity

M. Lynne Markus
Bentley College, USA

Christina Soh
Nanyang Technological University, Singapore

ABSTRACT

An important line of research on global information management examines the effects of national culture on information technology (IT) development, operations, management, and use. This chapter argues that global information management researchers should not lose sight of structural conditions related to business-to-business and business-to-consumer e-commerce activity. Structural conditions are physical, social, and economic arrangements that shape e-commerce business models and influence individual and organizational use of the Internet. Examples include geography (which affects the physical distribution of goods purchased online), space (which influences the choice of access technology for e-commerce), and financial infrastructure (which is related to credit card use). Structural conditions differ from country to country — and even from location to location within country, but they are not necessarily related to dimensions of natural culture. Therefore, valid explanations of global differences in e-commerce activity require a careful assessment of relevant structural factors.

INTRODUCTION

Information systems (IS) research interest in the global aspects of IT use is growing, partly due to the efforts of publications like the *Journal of Global Information Management (JGIM)*. A popular type of study examines the effect of national culture on IT development, operations, management, and use (Gallupe & Tan, 1999), where national culture is frequently understood in terms of Hofstede's (1983, 1991) concepts and operationalizations (Davison, 1996).

This chapter reminds the IS community not to neglect the structural conditions (Markus & Benjamin, 1997; Orlikowski, 1992) within which IT use occurs. Structural conditions are physical, social, and economic arrangements that shape e-commerce business models and influence individual and organizational use of the Internet. Examples include geography (which affects the physical distribution of goods purchased online), space (which influences the choice of access technology for e-commerce), and financial infrastructure (which is related to credit card use). Structural conditions differ from country to country—and even from location to location within country, but they are not necessarily related to dimensions of national culture. Therefore, analysis of cultural differences alone is unlikely to provide a satisfactory explanation of global differences in e-commerce activity. Valid explanations of global differences require a careful assessment of relevant structural, as well as cultural, factors.

To make this point, we examine a few of the structural conditions likely to influence e-commerce activity that are significantly different in various parts of Asia than they are in the US. The next two sections of the chapter describe structural conditions related to business-to-consumer (B2C) and business-to-business (B2B) electronic commerce activity. The discussion section identifies implications for future research.

BUSINESS-TO-CONSUMER ELECTRONIC COMMERCE

In this section, we address the adoption of B2C e-commerce by individuals and the development of B2C e-commerce business models by firms.

Structural Factors in Individual B2C E-Commerce Adoption

One structural factor likely to affect IT adoption and e-readiness is the urban-rural distribution of a country's population. People in rural districts generally have lower levels of access to the IT infrastructure necessary to sustain ordering over the Web; long distances may make "delivery to order" difficult, if not impossible. In North America, urban dwellers comprise 77% of the population; in Asia as a whole the figure is 37% (United Nations Population Division, 1998). But within Asia, there are huge differences. The percent urban is 100% in Singapore, 95% in Hong Kong, 81% in South Korea, 78% in Japan, 54% in Malaysia, 30% in China, 27% in India, and 20% in Thailand (<http://www.xist.org/global/urban.htm>). It is not surprising, therefore, that the latest Economist Intelligence Unit's survey ranks largely urban countries or territories like Singapore and Hong Kong high on e-readiness while

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