

# E-Commerce in a Digital Economy

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## INTRODUCTION

A digital economy is a convergence of communications, computing, and information. The essential in the new economy is a structural shift from the industrial economy toward an economy characterized by information, intangibles, and services, and a parallel change toward new work organizations and institutional forms (Gronstedt, 2001; Harreld, 1998; Sharma, Wickramasinghe & Gupta, 2004; Woodall, 2000). The new economy or digital economy is based more in the form of intangibles, information, innovation, and creativity, to expand economic potential (Sharma, 2004; Tapscott, 1996, 1998) and is based on the exploitation of ideas rather than material things. The essential elements of the digital economy are:

- Digitalization and intensive use of information and communication technologies (ICT);
- Codification of knowledge;
- Transformation of information into commodities; and
- New ways of organizing work and production.

This implies that extensive information and many services are available online. A widely distributed access to the networks, the intranet and Internet, and of skills to live and work in the Information Society, is the basis for the digital economy. In a digital environment, the Internet's growth and e-commerce begins to create fundamental change to government, societies, and economies with social, economic and political implications (Boulton, Libert, & Samek, 2000; McGarvey, 2001). E-commerce has already improved business value by fundamentally changing the ways products are conceived, marketed, delivered, and supported. The relationship and interaction of various stakeholders such as customers, suppliers, strategic partners, agents, or distributors is noticeably changed. The real impact of e-commerce is its ability to reduce costs and prices and make doing business more efficient (Zwass, 1998). These savings permeate the entire value chain and impact significantly in business interactions with other businesses (Bernardes, 2000; Sharma, 2004; Sharma & Gupta, 2003a).

## BACKGROUND

As e-commerce continues to grow rapidly, it could have significant effects on the social and economic structures. The impacts of these changes are diverse and may even widen the digital divide among nations, alter the composition of trade, disrupt labor markets, and change taxation (Anonymous, 2000). Widespread use of the Internet for e-commerce may have ramifications for intellectual property rights, privacy protection, and data filtering etc. Therefore, in the digital economy, it is becoming imperative to know how e-commerce affects organizations and society for economic and social concerns. Some of these effects of e-commerce are unintentional and create adverse business and personal conditions that could have societal consequences. Social and economic aspects of information and communication technologies (ICTs) have been studied by a wide variety of researchers and practitioners for over fifty years (Dutton, 1999). However, the influences of e-commerce are far bigger than previously imagined (Sharma & Gupta, 2003b; Sharma & Gupta, 2001).

E-commerce continues to show strong growth and has been influencing the social and economic growth of nations. While e-commerce technologies have helped nations to accelerate their economic growth and to provide more opportunities for businesses to grow, but it has also created many challenges and effects across numerous domains of society, and policy makers. These unintended consequences of e-commerce have raised concerns about whether e-commerce benefits only the privileged few. This article describes the various unintended socioeconomic impacts and influences that have been created by the e-commerce in a digital economy.

## UNINTENDED CONSEQUENCES OF E-COMMERCE

As the digital economy expands, we are beginning to see the effects at both the individual and aggregate levels (Granovetter, 1985; Sharma, Wickramasinghe, & Gupta, 2004). Some unintended consequences are discussed in the next paragraph.

## Increasing the Digital Divide

The use of ICTs for e-commerce deepens and intensifies the socioeconomic divisions among people, businesses, and nations. On one hand, e-commerce has provided new opportunities for economic growth; on the other hand, it has created a social problem of digital divide. Digital divide refers to the disparity between those who have use of and access to ICT, and those who do not. More than two-thirds of the world population is still deprived of access to ICTs. There is a complicated patchwork of varying levels of ICT access, basic ICT usage, and ICT applications among socioeconomic groups; many disparities are getting even larger (Sharma, 2004). Hindered by poverty and a poor telecommunications infrastructure, the gap between developing nations and developed nations is widening further and therefore, those nations who are not able to join the e-commerce bandwagon and have poor access to the Internet, suffer from great disparity in wealth (Rombel, 2000; Sharma, 2004).

## E-Commerce and Marginalization

The use of ICT for e-commerce has brought greater than the existing marginalization. These sentiments are echoed by the World Employment Report (2001), which says that the use of technologies such as e-commerce is positively correlated with economic growth—both on a national and organizational level. It also states that in countries where ICTs are relatively expensive, many people (particularly previously marginalized, e.g., rural people) are further marginalized. These persons are marginalized to a greater degree than before (i.e., they are being excluded from the electronic market place and are simply ignored by “electronic players”). Those organizations or business people who do not have access to such facilities are unable to respond. Again, they are left out of the mainstream of activities (Sharma, 2004).

## Social Isolation

E-commerce has been an important facilitator of new flexible work forms. Types of flexible work refer to; the location of work, with a flexible location (e.g., working on the move, working from home, and working from telecentres or satellite offices). E-commerce has far reaching implications in a social context. On one hand, it provides all the comfort of shopping from home, on the other side, it removes old-fashioned human interactions for social needs (Gershuny, 2000). E-commerce makes it possible for consumers to purchase almost all their needs from home and have those items delivered, but this phenomenon leads to social isolation. Due to such phenomenon, there are fewer people active in their neighborhoods than in the 1960s.

## Privacy

The emergence of ever pervasive and intrusive technologies is representing a threat not only to privacy, but to fundamental freedoms as citizens (Ambrose & Gelb, 2001). Computers can monitor every aspect of our online activities. In the work place, electronic monitoring of employees is not unusual. The threats to our freedoms are even wider than ever imagined (Gupta & Sharma, 2001; Miyazaki & Fernandez, 2000; Zaret & Sawyer, 2000).

Privacy remains an important issue while doing e-commerce. Two-thirds of Internet users are concerned with the confidentiality of the Internet (Cranor, Reagle, & Ackerman, 1999; Hoffman, Novak, & Peralta, 1999; Pew Research Center, 2000) and an equal number see the Internet as a threat to their privacy (Cole, 2001). Privacy threats may lower participation in commercial and social activities online (Pew Research Center, 2000) and are of particular concern to new users (Pew Research Center, 2000). A content analysis of leading e-commerce sites by the Federal Trade Commission found that only 20% met the agency's standards (FTC, 2000). These guidelines entail disclosure of privacy policies, providing consumers choice and consent, access to their data, and security of the data that is collected. Independent studies have revealed continuing gaps in online privacy practices (Culnan, 1999, 2000; Miyazaki & Fernandez, 2000; Miyazaki & Krishnamurthy, 2002).

## Survival of Local Businesses

Whitten and Steinfield show that as electronic commerce grows, it will create an important socioeconomic side effect which will increase competition with the traditional businesses in any given local community (Steinfeld, Mahler, & Bauer, 1999a, 1999b). Their study indicates local merchants are ill-prepared to take full advantage of electronic commerce due to various reasons, and thus are unlikely to see gains from it. Distant Web-based businesses have several advantages over their local physical businesses. Using transaction cost theory, one can conclude that electronic commerce implies new competition for local retailers, particularly those offering products that are readily obtainable from other sources, and that are easily transported (Steinfeld & Whitten, 1999; Steinfield, Mahler, & Bauer, 1999, Uzzi, 1997).

## Community Level Impacts of Electronic Commerce

E-commerce has many positive influences at the individual level whereby local buyers gain more value and greater access to suppliers, however, the results at the

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