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The challenge of e-business for the South African apparel sector

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Abstract

Innovation-intensive growth is exemplified by new information and communication technologies (ICTs) such as the internet and internet applications like e-business. E-business plays an important role in facilitating innovation by fostering greater networking in the economy, and making possible faster diffusion of codified knowledge and ideas. This paper explores the potential of e-business to provide a necessary lever to enhance competitiveness of the South African (SA) apparel sector. In particular, the paper critically discusses the opportunities, challenges and risks of e-business for the apparel sector. Despite strong theoretical arguments suggesting that e-business has much to offer the garments industry, the empirical evidence would seem to suggest that e-business in the SA apparel sector is still in its infancy. The paper proposes a number of policies designed to create an enabling and nurturing environment aimed at promoting and accelerating the diffusion of e-business technologies and strategies in the SA apparel sector. © 2002 Elsevier Science Ltd. All rights reserved.

Keywords: E-business; South Africa; Apparel sector; Information and communication technologies; Knowledge economy; Innovation

1. Introduction

For decades, the South African (SA) apparel sector was sheltered by state protectionism and a policy favouring import substitution industrialisation. In the post-apartheid era, however, the inwardly oriented apparel sector has become increasingly exposed to the cut and thrust of international competition as a direct result of a major shift in state policy to open markets, a rapid erosion of both tariff and non-tariff barriers and the implementation of an export-oriented industrial policy (Habib and Padayachee, 2000). The industry's drive for international competitiveness has, however, been problematic. Over the last decade, the apparel industry has experienced low productivity, massive formal sector job losses, firm closures, and a flood of cheap imported clothing, both legal and illegal, primarily from the Far East (Altman, 1994; Harrison and Dunne, 1998; Salinger et al., 1998).

The convergence of these factors, resulting mainly from the pressures of globalisation, the intensification of international competition and rapid and sweeping trade liberalisation, have led to a fragmentation of the garment

manufacturing industry in South Africa. This is partly attributed to South Africa's increasing integration into the global economy following years of relative autonomy under the apartheid regime. This process of global integration, however, has been accelerated through the ANC's Growth, Employment and Redistribution (GEAR) strategy, which was implemented in 1996 in the wake of a currency crisis. GEAR follows orthodox economic ideas focused on fiscal austerity and the promotion of trade liberalisation, leading to increasing international competition, along with increasing opportunities for exports. The key challenge thus confronting the SA apparel sector is not *whether* to participate in global processes, but *how* to do so in ways which provide for sustainable growth.

For the SA apparel sector, e-business represents a chance not only to connect with global markets but also to catch up. The international apparel industry is increasingly becoming information and communication technology (ICT) based and knowledge-driven. Increasingly leading-edge apparel buyers and manufacturers are using ICTs to transform the way they do business and in which they collaborate with trading partners. In particular many of them are using the internet to develop close knowledge-based links with customers and suppliers. The *strategic benefits* of collaboration are often greater than the significant cost savings. The success of the SA apparel

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sector will depend on how well the sector penetrates high value-added export markets, and on how well it exploits knowledge, skills and creativity. A daunting challenge is one of creating and nurturing a culture of innovation and change in the SA apparel sector, in order to maintain long-term sustainable competitive advantage.

In the relatively small, captive SA market, competitiveness has previously revolved more around marketing effectiveness and price competition than production and systemic efficiencies. The small scale and volumes of the SA market perhaps made the viability of full-fledged business information systems questionable (Moodley, *in press*). However, the current pressures of globalisation and the challenge to direct overseas market expansion underscores the importance of e-business for the local apparel sector. SA apparel producers are competing in export markets characterised by ICT-driven firms, sophisticated IT infrastructures, high internet connectivity penetration, increased availability of broadband connectivity, and increased willingness to buy and sell over the internet.

Building and maintaining new sources of competitive advantage are crucial for local apparel producers to break out of the low productivity, low value-adding path in which they are currently locked into. The critical question is: Can e-business provide a necessary lever to enhance competitiveness of the SA apparel sector? Time-to-market, for instance, has arisen as a critical competitive asset in the global economy, especially since shorter seasons, more rapid product cycle turnover, and smaller production runs are becoming the norm in the value-added, fashion-oriented segment of the global apparel market (Gereffi, 1999).

The role of ICTs in fostering innovation-intensive growth and entrepreneurship has recently come under the academic spotlight (OECD, 2000a,b). E-business is an example of a technological innovation that has potential for promoting process improvements in the SA apparel sector. The importance of technological innovation lies in the fact that economists generally attribute the greater part of measured growth to technological progress rather than to increases in the traditional inputs of labour and capital (Freeman, 1986; Porter, 1990; Federke, 2000). From a development perspective, this exploratory study is important because recent evidence suggests that sectors and countries which have experienced the most rapid diffusion of ICTs, have also experienced the most rapid rates of employment and output growth (OECD, 2000a,b; Baily and Lawrence, 2001; ILO, 2001).

This exploratory paper critically discusses the challenges, opportunities and risks of e-business for the SA apparel sector. While this study is far from exhaustive, it represents an important first step in understanding the potential of e-business in a developing country context.

2. E-business

Economic globalisation is driven by pervasive ICT use, deregulation, the opening of markets and global trade expansion (Dicken, 1998; Cohen et al., 2000). ICTs now form an integral part of the accelerated pace of globalisation, linking together nation states into complex webs of transnational exchanges (Castells, 1996; Gereffi, 2001). The internet is becoming a key enabler of the networked, knowledge economy (Stiglitz, 1999). Moreover, economic progress is becoming increasingly innovation-driven, and information and knowledge are becoming primary wealth-creating assets (Castells, 1996; Fine, 1998; Evans and Wurster, 2000). Quah (1997), for instance, argues that the global economy is becoming increasingly 'weightless'.

The term e-business has no widely accepted definition. The author defines e-business as *any form of commercial or administrative transaction or information exchange that takes place via an ICT-based, computer-mediated network*. E-business is ultimately about using ICTs to harness the networks of trust, knowledge sharing and information processing that takes place both *within* and *between* organisations (Davenport and Prusak, 1998). E-business thus entails the application of ICTs to the complete value chain of business processes. Network computing is the technology that underpins e-business.

ICTs offer a wide spectrum of potential commercial activities and information exchange (Moodley, *in press*). This paper focuses exclusively on business-to-business (B2B) interactions. There are two main reasons for this emphasis: (1) our concern is primarily with the potential of the internet for enhancing inter-firm linkages in the value chain, and (2) current trends seem to indicate that B2B e-commerce will far outstrip that of business-to-consumer (B2C) e-commerce (IBM, 2000; Singh, 2000). Excluding government transactions, approximately 90% of global e-commerce by value is conducted between firms (Mansell, 2001). According to the Gartner Group, B2B e-commerce will grow from US\$145 billion globally in 1999 to US\$401 billion in 2000, and to US\$7.3 trillion by 2004 (Standard and Poor's Industrial Surveys, 2001). BMI-TechKnowledge, a market research consultancy, predicts that the B2B e-commerce market in South Africa will increase from R21 billion in 2000 to R87 billion in 2002 (*E-business runs on e-intelligence*, 2000, p. 30).

B2B e-commerce encompasses a range of electronic interactions between a firm and its upstream and downstream trading partners. B2B e-commerce refers to procurement, logistics and administrative processes occurring between firms, and can be divided into two categories: *open marketplace-based trade* and *direct trade between business partners*. The former takes place at various internet-based auctions or exchange sites, whilst the latter occurs either through a firm's website

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