Chapter 5.8
How can Information Technology be Adopted by Micro-Enterprises:
Guidelines for Sustainable Development

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ABSTRACT

The growth of micro-enterprises is a key driver of economic development. The ability of micro-enterprises to adopt IT can potentially increase their growth by 3.4% according to a World Bank expert. However these gains do not always take place as the challenges are many. Current theoretical models on IT adoption focus on the intent to adopt IT in large organizations where employees' attitudes and perceptions are measured in terms of their objectives within the structures of accountability. Micro-enterprises are unique in that the intention to adopt is an individual decision made by the micro-entrepreneur. It is often the innovative ways in which IT is used that enable the gains to be realized by micro-entrepreneurs. This chapter describes a process that can be used to enable micro-entrepreneurs faced with limited resources to adopt IT to grow their businesses. This process of IT therapy involves diagnosis, interventions and an assessment of IT for development outcomes. Examples and guidelines are provided to enable this process to be used by practitioners. This chapter concludes with alternatives for sustainable development and guidelines for achieving these improvements in micro-enterprises.

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INTRODUCTION

Micro-enterprises are the predominant form of business in developing communities – especially in areas where infrastructure and resources are lim-

ited. At the same time growth of micro-enterprises is essential to the development of these communities. The survival of these businesses remains a challenge because they are led by the one micro-entrepreneur who trades skills and/or products to earn a living. Adoption of ICT is difficult because the resources to purchase equipment are limited and training is often unavailable or inadequate. However when micro-entrepreneurs do adopt IT, their businesses may grow by 3.4% according to one study (Qiang et al., 2003). Research over a period of time has shown that ICTs can contribute to poverty reduction when applied in a manner that is appropriate to the context (Avgerou, 1998; Kenny, 2000; Cecchini & Christopher, 2003; Akpan, 2003; Krishna & Walsham, 2005). It has also been demonstrated that ICTs contribute to growth (Baliamoune-Lutz, 2003; Kauffman & Kumar, 2008). This suggests that there are opportunities that need to be addressed when applying ICTs to enable development.

While little has been done to research the adoption of ICTs in micro-enterprises, examples include the use of mobile technologies by fishermen to access markets and increase efficiencies and lead to improved economic growth (Abraham, 2007; Waverman, Meschi & Fuss, 2005). Raymond et al. (2005) observed a 4% increase in sales as well as 5% increase in export performance in SMEs in the manufacturing sector in Canada when they adopted e-business techniques. By using technologies such as websites, email and telephones to communicate with customers, SMEs can provide better customer service and expand their customer base to help reach out to both local as well as international consumers for their products. Increased utilization in IT is not always evident through increased revenue of businesses. As a study by Southwood (2004) shows, IT investments by SMEs in South Africa resulted in profitability gains from cost savings rather than from an increase in sales.

While these efforts may appear to be very successful, they do not address the sustainability and growth of these businesses or of the communities and regions within which they reside. This is because the adoption of IT by micro-enterprises is not straightforward. It requires assistance on a number of levels. First an assessment of their needs has to be made in order to find out how they can be assisted. Every micro-entrepreneur has very unique needs and aspirations. They are also part of communities that determine what the micro-entrepreneur considers important. Hence a needs assessment not only should consider the micro-enterprise by itself but also the community. Second, the technology itself is often not the solution; it is the innovative ways in which the technology is used that enable the micro-entrepreneur to grow their business using IT. Third, the implementation requires a combination of training, technology and most importantly education on resources available to the business. Finally the sustainability of these initiatives needs to be considered in the light of economic, social and human considerations.

This chapter addresses the above four needs through a process called IT Therapy (Wolcott, Qureshi & Kamal, 2007; Wolcott, Kamal & Qureshi, 2008; Qureshi, Kamal & Wolcott, 2008). It reports on the success of current initiatives using IT therapy with micro-enterprises in an underserved community in Omaha, Nebraska. Following the IT therapy interventions, it was possible to bring about economic, social and human development over a period of time. Insights from the results obtained from the IT therapy initiatives are used to formulate guidelines for informing practitioners working with micro-enterprises to help foster development in underserved communities. Recommendations for sustaining such efforts are also suggested.

BACKGROUND

While many problems faced by micro-enterprises are not fundamentally related to technology, selec-