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**INFORMATION AND COMMUNICATIONS TECHNOLOGIES AND SMALL
ENTERPRISE DEVELOPMENT: WHAT CAN BE DONE TO BRING OUT
THE EMPLOYMENT GENERATION POTENTIAL?**

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**INFORMATION AND COMMUNICATIONS TECHNOLOGIES AND SMALL
ENTERPRISE DEVELOPMENT: WHAT CAN BE DONE TO BRING OUT
THE EMPLOYMENT GENERATION POTENTIAL?**

by

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Abstract

This paper addresses the issue of small enterprises and their role as important sources of employment and tools for poverty alleviation. Specifically, the paper discusses enterprise development programs as part of national development strategies, with the aim of reducing impediments to successful enterprise operation through the dissemination of good practices.

The paper also reviews the impact of the fast-changing world of ICTs on small development enterprise (SED). It explores the new constraints to SEDs arising out of the technological revolution in ICTs and their amelioration. It also strives to discover the potential of ICTs for employment generation in small enterprises.

Additionally, this paper discusses the potential benefits of ICTs for the typical small enterprise operating in a developing country context, and the absorption rate of ICTs by small enterprises. It highlights the importance of utilizing ICTs in Business Development Services and , and emphasizes the role of technology business incubators in generating employment.

Finally, the paper presents the role of government in overcoming constraints and barriers to the use of ICTs by small enterprises.

ICT¹ and Small Enterprise Development: what can be done to bring out the employment generation potential?

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Small Enterprise Development (SED)

Small enterprises³ are important sources of employment. They play a major role in poverty alleviation. For this reason small enterprise development programmes, often donor assisted, form part of national development strategies. Broadly speaking, efforts to promote small enterprise development assume that more small enterprises will be created, and less will fail, if certain constraints can be overcome.

The aim of ILO small enterprise development programmes is to reduce the impediments to operating a successful small enterprise by disseminating good practices, and thereby to facilitate the creation of more and better jobs for women and men. Advances in ICT over the last decade clearly add new opportunities for small enterprise development.

This paper reviews some of the issues presented by the fast changing world of ICT on small enterprise development (SED). It asks whether there are new constraints to SED arising out of the technological revolution in ICT, and, if so, what can be done to ameliorate them? What can be done to bring out the employment generation potential of ICT in small enterprises?

Constraints to SED

Typically, an enterprise survey (or study) is undertaken to obtain information about perceived constraints, and then enterprise development programmes are designed to ameliorate them. Constraints may affect the small business sector in general, or may be firm or sub-sector specific. For example, small enterprises often face general constraints with obtaining financing, accessing information, keeping up-to-date with technology, and complying with regulatory requirements. Whereas, for instance, firm-level and sector-specific constraints may include poor management, irregular product quality, lack of training for workers, etc....

General constraints can be tackled by improving the enabling environment for enterprise creation and development. Programmes can be put in place to improve the legal and regulatory framework, to improve infrastructure, to establish microfinance institutions and SME credit schemes, to improve representation through association building, and to improve the quality of vocational training. Sub-sector and firm specific constraints can be tackled by improving access to business development services (BDS) and financing.

ICT and Small Enterprises in Developing Countries

For high-tech small enterprises the world of ICT clearly has very important implications. But what relevance does ICT have for small enterprises operating in poor communities?

To answer this question, we must look at the **potential benefits** of ICT for the typical small enterprise operating in a developing country context, and at the **absorption rate** of ICT by small enterprises.

¹ Information and Communications Technologies

² The author would like to acknowledge the work done on ICT and SED by colleagues in the ILO's In-Focus Programme on Boosting Employment Through Small Enterprise Development, from which several examples are quoted.

³ Small enterprises are taken to include both small and micro enterprises for the purposes of this paper.

The potential benefits are numerous. ICT offers better and cheaper communications; for example through mobile telephones and email. It gives access to information; for example on commodity prices, competitors and suppliers. New business opportunities emerge through ICT, such as Internet "cafés", and village mobile phone services. These can reach poor communities as Grameen Telecom in Bangladesh has demonstrated. Grameen's pioneering work has shown how a leading provider of microfinance to poor communities can also be a leader in introducing ICT services.

Moreover, there are many opportunities for business to business (B2B) transactions, a good example of which is the growth of small enterprises operating in India's international software industry.⁴ Other examples include the use of the Internet to market arts and crafts products from poor communities.

The potential benefits of improved communication can reinforce the competitive advantage of small enterprises, which is their speed and flexibility in responding to changing market demands. ICT has the potential to overcome some of the problems that isolated small enterprises face, especially lack of information about new business opportunities.

Are these potential benefits being realised in practice by small enterprises? Or are there new constraints that need addressing through development interventions?

Evidence of ICT usage by small enterprises

There is evidence that small-scale entrepreneurs in developing countries appreciate the overall benefits of ICT.⁵ For example, a survey of small enterprises in the Philippines found that they overwhelmingly ranked communication services as the most important, followed by information services, and 74% noted that access to telecom services had definitely increased their business profits.⁶ The rapid increase in the use of mobile phones worldwide in developing countries gives further testimony to the high demand for better communication services. In fact, the International Telecommunications Union estimates that adding one mobile telephone per 100 inhabitants increases GDP per capita by just under US\$1,000.⁷

Use of mobile telephones by small enterprises is clearly the area where absorption of ICT is taking place with greatest success. The main barriers to usage are cost and coverage, and here there is scope for government intervention to promote a competitive, low cost, mobile telecommunications sector.

Use of the Internet, including email, by small enterprises in developing countries is growing but from a low base. In Vietnam, the International Finance Corporation Mekong Project Development Facility found that 79% of firms using the Internet (only a small proportion of all firms) were interested in information about competitors, suppliers and new markets.⁸ Constraints to Internet usage include lack of awareness and exposure to the potential benefits, low levels of computer literacy, and limited access to Internet service providers.⁹ Though sometimes a problem, cost does not appear to be the most significant barrier, especially as Internet services are often available at reasonable cost through Internet cafés. In circumstances where unawareness appears to be the main constraint, there would appear to be significant potential for enterprise development programmes to intervene to improve the absorption rate of ICT by small enterprises.

⁴ Tanburn, Jim, and Singh, Alwyn Didar, 2001, ICTs and Enterprises in Developing Countries: Hype or Opportunity? ILO IFP-SEED Working Paper No.17

⁵ *ibid*

⁶ Miehlsbradt, Alexandra Overy, March 1999, How to be demand-led: Lessons for Business Development Services Providers from Information and Communication Services in the Philippines. USAID MBP Paper for Donor Committee Conference, Rio De Janeiro, Brazil

⁷ ITU, 1999: World Telecommunication Development Report: Mobile Cellular World Telecommunications Indicators

⁸ ILO, 2001: World Employment Report (p97)

⁹ Tanburn, Jim, and Singh, Alwyn Didar, 2001, ICTs and Enterprises in Developing Countries: Hype or Opportunity? ILO IFP-SEED Working Paper No.17.

ICT and Enterprise Development Programmes

Though it may be hard for enterprise development programmes in developing countries to overcome cost hurdles to the use of ICT, there are plenty of opportunities to familiarise local entrepreneurs with the potential benefits of using mobile phones, email and the Internet. Employers and business associations can facilitate access to these services by establishing business centres. Trade and technology fairs can be used to demonstrate and expose entrepreneurs to ICT. Local economic development programmes can use private-public sector partnership initiatives to foster use of ICT by small enterprises and to improve networking.¹⁰ Vouchers can be used to encourage small enterprises to take training in the use of computers. Technology business incubators can be established to assist start-up enterprises in new business areas with an ICT focus. Open and distance learning programmes can be developed to train entrepreneurs in better business management. Radio, a traditional media that should not be ignored, can be used to broadcast business information and promote discussion about business issues with decision-makers.¹¹ Importantly, many of these programmes, especially business development services, can be operated on a sustainable basis by charging fees to users.

Business Development Services (BDS) and opportunities for ICT

BDS, which covers training, information, marketing and a host of other services aimed at helping businesses perform better, has been struggling for many years to achieve reasonable levels of outreach to small enterprises. One of the problems faced by BDS providers has been how to cost-effectively tailor programmes to the needs of their small business clients, and to make them aware of the benefits of BDS.

BDS delivery costs can be very high, if, for example, business advisers need to travel to visit entrepreneurs at their business premises in order to deliver advisory services. The same applies to training. The costs of attending a face-to-face training course, includes fees, plus lost work time and travel costs. ICT opens new opportunities for BDS providers to reach more small enterprises at a much lower cost and in a more flexible way. Mobile telephones and email offer new modes of communication that can reduce the costs of delivering many types of BDS. They offer the potential to deliver training and advice at a distance.

The challenge is to design BDS services that effectively combine ICT delivery methodologies with proven and sound training and advisory methods using a traditional face-to-face approach. Even when using distance communication methods, the long years of experience of the Open University in the UK show that it is advisable to combine distance education courses with some face-to-face training sessions in order to build motivation and reinforce learning. The same is true of business advisory and extension services. Some face-to-face business counselling sessions help to establish a good rapport and trust between adviser and client. This will facilitate business advisory sessions using mobile phone, email, or moderated internet discussion groups.

There is much still to be learned about how to use these new ICT-based methods for delivering BDS and to develop a market for them. Donor agencies are increasingly targeting their BDS projects towards organisations that facilitate BDS market development by designing new products, surveying market demand and promoting sustainable use of BDS products. ICT can play a central role in the BDS market facilitation process, and indeed ICT-based BDS products are often more economically viable than other forms of business support. Much re-training needs to take place to help BDS providers re-shape their services to meet client needs and make full use of new technology in order to reduce costs and target their services more effectively. The International training Centre of the ILO is launching a new internet-based training diploma for small

¹⁰ The ILO International Training Centre's DELNET programme already links up local economic development programmes in Latin America and Europe with excellent results in terms of idea sharing.

¹¹ The ILO has demonstrated the effectiveness of business programmes on the radio in Uganda. See <http://www.ilo.org/sed>

enterprise advisers to help them re-orient their BDS to fit the new market conditions. Information about this course can be obtained at <http://learning.itcilo.it/bds>.

Technology business incubators – potential for employment generation

It is popular in industrialised and emerging economies to establish business incubators for technology based small enterprises. The idea of a business incubator is to provide a package of premises, financing and BDS to start-up enterprises so that the chances of success are increased. BDS might include accounting and computer services as well as business advice and training. There are economies of scale and networking possibilities by clustering technology based enterprises together. Selecting enterprises for incubation, providing incubation services cost-effectively, and successfully graduating enterprises out of the incubator are the main challenges in managing an incubator.

The Role of Government in overcoming constraints to the use of ICT by Small Enterprises

Governments, both local and national, have a multiple role in facilitating access to ICT services by small enterprises. Policies and regulations concerned with licensing and attracting investment into the ICT sector are crucial. It is important to foster a positive climate for the adoption of ICT by small enterprises. Not to do this would lead to a competitive disadvantage in increasingly globalised markets. Significant investment will be needed to improve access to ICT, and create what could be termed the necessary *info-structure*, especially to rural and poor communities. Healthy competition between mobile phone operators and Internet service providers is fundamental to lowering prices, a key factor in ICT take-up by small enterprises. Developing the human capital with the skills to operate and maintain ICT services is essential and this has significant implications for vocational education and training systems, as well as enterprise-based training. A legal framework to facilitate the development of e-commerce and to safeguard the public is required. Harmful activities such as creating and distributing computer viruses may not be illegal under existing legislation and there are legitimate concerns about the dangers of the Internet being used for illegal and immoral purposes. Nevertheless, decisions about censorship will have implications for the development of the ICT sector and the associated costs. Local government also has a role to play with initiatives such as developing technology business incubators, and in relation to local economic planning decisions.

Conclusions

The fast growth in the use of mobile phones and the more gradual increase in use of the Internet by small enterprises show how ICT has importance for small enterprise development. The potential benefits of better and cheaper communication are well appreciated by entrepreneurs in poor communities. There are many constraints holding back the absorption of the potential benefits offered by ICT to small enterprises. They include problems with awareness, accessibility, skills, and prices. Enterprise development programmes can play a role in ameliorating some of these constraints. Business development services is one area where ICT has significant potential for supporting small enterprise development. However, there is much pioneering work still to be done in showing how BDS can be provided to small enterprises using ICT. Much work also needs to be done in many countries on policy and regulatory issues. National and local governments have an important role in establishing an enabling environment to facilitate ICT access by small enterprises, especially for those located in rural and poor communities.