

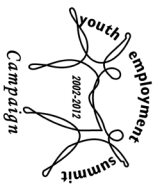
Creating more opportunities for young people using information and communications technology

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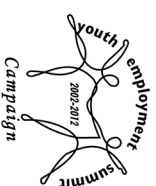
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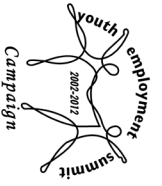


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Introduction

Entrepreneurship has considerable appeal to many people because it is associated with wealth generation or at a minimum job creation. Nor is its appeal restricted to only achieving economic ends - social entrepreneurship seeks to foster social capital by selling goods and services through the market, thereby mixing the achievement of social ends with economic means.

Entrepreneurship can refer to a range of activities from self-employment to the setting up of micro businesses that employ a small number of people to high-growth new ventures. Therefore, identifying what entrepreneurial activity is and how it is best fostered has been a major challenge for public policy makers in both high income and developing countries.

The focus of this paper is on self-employment and entrepreneurship opportunities through the use of information and communication technologies (ICT). ICTs offer particular advantages to people starting a business in low and middle income countries. One is that ICTs offer potentially low cost forms of communication with high-income markets or large domestic markets in middle-income countries. Another is greater range of opportunities the application of new communication-based technologies can offer for servicing the needs of the poor.

The world's poor remain a market largely untapped by the international corporations.¹ This is often due to a lack of appreciation by international corporations and local enterprises of how to take advantage of available distribution networks. One outstanding illustration of this is the high demand for mobile phone services in developing countries if packaged in a way that is affordable and easily accessible.

Entrepreneurship: a solution for youth employment?

The definition of an entrepreneur adopted for the purposes of this paper is a person who starts and builds a new business.² These new businesses can range from initiating self employment as, for example, a sole trader with minimal resources to setting up a high potential venture backed by considerable funding.

The concept of entrepreneurship also encompasses a mindset which is usually taken to involve risk taking in the face of uncertainty and other attitudes and skills such as 'boldness, ingenuity, leadership, persistence and determination'.³ It is, therefore, important to take into account even in relation to self employment, there is a set of skills required that are not always required of a wage employee – self management in relation to budgeting in relation to income and expenditure as well as time, for example. The reward sought is a return on the extra effort and financial capital invested, often an individual's or family's savings.

¹ C.K. Prahalad and Allen Hammond, 2002, 'Serving the World's poor. Profitably', Harvard Business review, September

² Bhilde, Amar, 2000, *The Origin and Evolution of New Businesses*, Oxford University Press New York, p.3

³ Chandler, A.D.: 1990, *Scale and Scope: the dynamics of industrial Capitalisation*, belnap Press, Cambridge, Mass, pl,cited in Bhilde, A 2000, p3.

Entrepreneurial activity can encompass not only individuals but also groups of people. Particularly in relation to high potential ventures, entrepreneurship is ‘an activity in which partnership or team of people, combining different skills, identify an opportunity to create a new product or service and then mobilise the resources, both financial and human, to realise the idea’.⁴

Entrepreneurship is not for everyone – however as a mode of economic activity, it has the potential to offer more opportunities for income generation than it does now. Entrepreneurship is an option that is viable for only a minority of a country’s population. However, what is unknown for most countries is the potential size of the population that could pursue entrepreneurial activity if the conditions were more favourable.

In South Africa, for example, a quarter of the population (26 per cent) believe they have the knowledge, skill and experience required to start a new business. However, only 7 per cent of the South African population in 2002 have done so, reflecting a considerable gap between the potential and the actual prevalence of entrepreneurship.

How widespread is entrepreneurship?

A rich source of information about the prevalence of entrepreneurs and the conditions needed to foster entrepreneurial activity is available through the results of a 37 country survey conducted under the auspices of the Global Entrepreneurship Monitor (GEM) project. The GEM surveys suggest that 12 percent of the world’s population aged 18 to 64 years are either ‘actively engaged in the start-up process or managing a business less than 42 months old’.⁵ However, the same national surveys showed major variations between countries. Less than 3 percent of adults 18 to 64 years of age are involved in entrepreneurial endeavours in Japan, Russia and Belgium. However, more than 18 percent of the adult population in India and Thailand are defined as entrepreneurially active.

Are young people more likely to be entrepreneurs than other age groups? The largest grouping of entrepreneurs is not found among young people but they are not far behind. The highest prevalence rate for entrepreneurial activity is to found among 25 to 34 year old men, (20 per 100), followed by 35 to 44 year old men (15 per 100) and then 18 to 24 year old men (13 per

⁴Leadbeater, C & Oakley, K:2001, *Surfing the Long Wave. Knowledge Entrepreneurship in Britain*, Demos, London, p9

⁵ Reynolds, P et al. 2002, Global Entrepreneurship Monitor 2002: Executive Report. Babson College, Ewing Marlon Kauffman Foundation & London Business School p.5 www.gemconsortium.org. In terms of actual numbers, the GEM survey estimates there are 460 million entrepreneurs active in the world. Most entrepreneurs are to be found in the developing countries of Asia and Latin America, there are 205 million entrepreneurs in India and China as well as 26 million entrepreneurs in the four Latin American countries in the survey (Argentina, Brazil, Chile and Mexico)

100). Women in these three age groups also record the highest prevalence rates for entrepreneurial activity (25 to 34 years – 13 in 100, 35 to 44 years – 10 in 100 and 18 to 24 years – 8 in 100).⁶

The entrepreneur take-up rate young people aged 18 to 24 years – 13 in 100 for young men and 8 in 100 for young women show how important this activity is for a significant group of young people.⁷ However, it would also be good to know what the potential rate for entrepreneurial activity. Fortunately, data for South Africa are available on this.

Gap between potential and actual prevalence of entrepreneurship

The Global Entrepreneurship Monitor 2002 Survey offers benchmarks against which to gauge the potential of entrepreneurship as a means of employment creation. In South Africa, for example, just a quarter of the population (26 per cent) stated on both 2001 and 2002 that they believe that they had the 'knowledge, skill and experience required to start a new business'.⁸ Those adults who believed they had the requisite skills were eight times more likely to become involved in starting a business than those who believed they lacked the requisite skills.⁹

Among the young Black population in South Africa with upper secondary schooling completed (ie matriculated), nearly a quarter of those aged under 23 years (24 per cent) believe they have the requisite enterprise start-up skills.¹⁰ The more formally educated the population, the more likely they are to see themselves as having the requisite skills to engage in entrepreneurial activity.

These data suggest that there is a wide gap in South Africa between the potential take up of entrepreneurial activity and the reality is a wide one. Only 6.5 per cent of the population surveyed could be classified as entrepreneurs compared with just over a quarter of the population who said they had the 'knowledge, skill and experience required to start a new business'. As the prevalence rate for entrepreneurial activity in the other developing countries surveyed is twice to three times the rate in South Africa, information on the gap between the potential and the reality is unknown until further analysis can be undertaken. The GEM Survey for India in 2001 showed a 11 in 100 prevalence rate for entrepreneurs compared with 42 in 100 of respondents to the random survey saying that they have the knowledge, skill and experience required to start a new business.¹¹

⁶ Ibid Figure 7, p28

⁷ Overall, men are about 50 percent more likely to be involved in entrepreneurial activity than women (14 percent to 9 percent). This ratio is even greater for opportunity-based entrepreneurship (9 percent to 5 percent), but becomes equal with necessity entrepreneurship (4 percent for men and 4 percent for women.)

⁸ Mary Lyn Foxcroft, Eric Wood Jacqui Kew Mike Herrington Nick Segal, 2003, *global Entrepreneurship Monitor 2002: South African Executive Report*, Centre for Innovation and Entrepreneurship, Graduate School of Business, University of Cape Town, p21

⁹ Ibid, p 21.

¹⁰ Ibid, p Table 7, p 26. This figure is very similar to all the other racial groups surveyed except one ('coloured') where 46 per cent of under 23 year olds saw themselves as having the requisite skills.

¹¹ GEM India Report 2001, Table 3.8, p 33.

Conditions needed to foster entrepreneurship

Entrepreneurship is a difficult process to foster because it requires so many different supporting components for an individual's to move beyond an idea or concept to successful execution. Promoting entrepreneurship as an option for young people is difficult even in high-income countries due to the risk-averse nature of many institutions from banks to education providers. As noted above, important features are the quality of the intellectual property protection regime, skill levels of the population in the country and support for starting a new business, including access to informal investors.¹²

However, in middle or low-income countries, the task is even more formidable due to a number of barriers which can range from antipathetic attitudes in society at large to entrepreneurship as an option for young people, to the lack of appropriate training and mentors and a denial of access to credit. These barriers in middle or low-income countries are further compounded where the entrepreneurship involves the use of information and communication technologies (ICT), due to the shortage of the technical and skill supports needed to make effective use of the new technologies.

The structure of this paper, therefore, is based on first identifying the conditions needed for entrepreneurship to flower and then the conditions for information and communication technologies to work effectively. Critical analysis of the ICT-based projects has shown that many have failed to move beyond the pilot stage because the supporting conditions for expansion were not present.

Promoting entrepreneurship as an option for young people requires a range of supporting actions by governments and other stakeholders. One vehicle for identifying whether these conditions are in place is a country's proposed national youth employment action plan. These are intended by the United Nations to be comprehensive, country-level assessments of the conditions favourable to entrepreneurship for young people.

UN support for youth employment

The Millennium Declaration in September 2000 committed world leaders to 'develop and implement strategies that give young people everywhere a real chance to find decent and productive work'.¹³ In response to this mandate, the UN Secretary General set up the Youth Employment Network to coordinate the efforts of the UN, the World Bank and the ILO in relation to youth employment and to act on recommendations from a High Level Expert Panel.

The UN General Assembly in December 2002 adopted, with 106 co-sponsors, a Resolution on Promoting Youth Employment, encouraging Member States to prepare national reviews and action plans on youth employment and to involve youth organisations and young people. The Youth Employment Network is the main body coordinating the implementation of the United Nations General Assembly Resolution A/57/165.

¹² Ibid p20

One of the four key prongs of the national youth employment action plans is a focus on entrepreneurship. The others are: governments' responsibility to promote employability, and the need for an emphasis on equal opportunities for young women and young men. The fourth key element is the need for governments to create an environment where employment creation is placed at the centre of macroeconomic and other public policies.¹³

In relation to entrepreneurship, governments are encouraged to promote :

a broad and dynamic concept of entrepreneurship to stimulate both personal initiative and initiatives in a broad variety of organisations, which include, but reach beyond, the private sector: small and large enterprises, social entrepreneurs, cooperatives, the public sector, the trade union movement and youth organisations. Countries also need to strengthen policies and programs so that small enterprises can flourish and create decent work within an enabling environment.¹⁴

In particular, five aspects of a reform program to promote entrepreneurship are proposed. First, it is recommended that governments seek to create a new culture of entrepreneurship, highlighting the value of entrepreneurs to society and as a worthwhile option for young people. Second, governments need to review existing regulations to make it easier to start and run enterprises. It is likely that in most cases, the number of procedures for a business start-up and the delay in getting authorization will need to be reduced. Other forms of support governments could provide to facilitate business start-ups are easily accessible one-stop sources of information and guidance to help young people learn how regulations work, why they need to be observed and what they need to do to comply.

The third area of support recommended for attention to promote youth entrepreneurship under a national youth employment action plan is in relation to education and training. In particular, it is suggested that existing courses also incorporate entrepreneurial and business skills as part of the core curricula.

The fourth important area recommended for attention is in relation to access to credit.

¹³ Towards a Global Alliance for Youth Employment-the next five steps Recommendations on policy and process 2003-2005 of the Second Meeting of the High Level Panel of the Secretary-General's Youth Employment Network 30 June-1 July 2003. Youth Employment Network, ILO.

¹⁴Ibid, para 1.2

One of the strongest stimulants to encourage young people to become entrepreneurs is to ensure they can easily access seed funds for their business ideas. They need space to try out their ideas, prove their talents and learn through experience before they enter the mainstream economy. Youth business funding must be seen as a distinctive mechanism to help young people into employment.¹⁵

The fifth suggested area for attention by governments in relation to the promotion of entrepreneurship for young people is appropriate forms of business support.

The more support a young entrepreneur can receive in the first years of activity, the better his or her chances of creating a sustainable business or of becoming more employable. Business people should be encouraged to support young entrepreneurs during the critical first years of their new business by transferring their knowledge, experience and contacts. They can do so by mentoring, including them in their networks, bringing the youth business into their supply chains or providing pro-bono advice and training.¹⁶

Supporting conditions for youth entrepreneurship?

These supporting conditions for entrepreneurship, however, are not likely to exist in any depth in most low and middle-income countries. Indeed, this is confirmed by results of the GEM 2002 survey where a negative relationship was found between a range of conditions believed by county experts needed to support entrepreneurship and the prevalence of necessity entrepreneurship. These suggested supporting conditions include adequate financial support, appropriate government policies and programs, mechanisms for transferring research and development to new firms, the presence of commercial and professional infrastructures and the protection of intellectual property rights.

The negative association between the presence of supporting conditions and the entrepreneurship of necessity suggests that the former are likely to help but are not an essential requirement for entrepreneurship to exist, especially where there are limited alternative ways of earning a livelihood. Perhaps a more accurate term for necessity entrepreneurship in low and middle-income countries is self-employment.

These results also suggest that efforts by governments and international agencies to foster entrepreneurship need to be more conscious of what sort of entrepreneurship they are seeking to support. Efforts to support opportunity-oriented entrepreneurship are not likely to be appropriate for necessity entrepreneurship. Measures such as protection of intellectual

¹⁵ Ibid, para 1.2

¹⁶ Ibid, para 1.2

property rights, the level of financial support needed, the nature of the commercial infrastructure and the type of business mentoring sought needed to be assessed in the light of people seeking a sustainable form of self employment rather than to grow an enterprise.

Challenges facing youth ICT entrepreneurs

As noted above, the second major challenge youth ICT entrepreneurs face is access to appropriate infrastructure in relation to information and communication technologies. A recent OECD report entitled ICT and Economic Growth: Evidence from OECD Countries, Industries and Firms notes that

... having the equipment or networks is not enough to derive economic benefits. Other factors, such as the regulatory environment, the availability of appropriate skills, the ability to change organisational set-ups, as well as the strength of accompanying innovations in ICT applications, affect the ability of firms to seize the benefits of ICT.¹⁷

One example of an appropriate infrastructure is the cost of telecommunication. The OECD report shows that countries with lower access costs typically have a higher take-up of the Internet. The OECD report highlights the features of a 'best practice' approach to the use of ICT by enterprises. However, in relation to in middle or low-income countries, what are the minimal ICT conditions needed to support for a fledgling enterprise?

The association between a country's per capita income and its capacity to support ICT suggests that efforts to foster youth ICT entrepreneurs in low-income countries (those with per capita incomes less than \$9,000) should consider first whether the available infrastructure is adequate to support a new ICT-based enterprise.

The importance of distinguishing between two types of entrepreneurship is highlighted in the 37 country Global Entrepreneurship Monitor (GEM) survey.¹⁸ The representative surveys found that nearly all (97 per cent) of the entrepreneurially active could be classified as either opportunity or necessity entrepreneurs. The former are defined as 'those who are willing volunteers seeking to pursue a business opportunity'. The latter are defined as 'those who become involved as a last resort when other options for work or participation in the economy are absent or are considered unsatisfactory'.¹⁹

¹⁷ OECD : New Report : ICT and Economic Growth : Evidence from OECD Countries, Industries and Firms' ICT Development Agenda, Commonwealth Telecommunications Organisation, 11 August, 2003 <http://www.icdevagenda.org/frame.php?dir=07&sd=10&id=466>

¹⁸ Reynolds, P., Bygrave, W., Autio, E. & Haygem, M, 2002 Global Entrepreneurship Monitor 2002 Summary Report. <http://www.gemconsortium.org/default.asp> People are defined as entrepreneurially active if they are trying to start a new business and meet three criteria: 1) have done something in the past year -behaviour not wishes and dreams, 2) they expect to own part of the business, and 3) they are in the start-up phase-no salaries or wages for more than 3 months. Also included are 'new business owner/managers' who are 1) active in management, 2) own some of the business, and 3) with salary or wage payments for a period of up to 42 months.

¹⁹ Ibid, p 13.

Weighted to represent the total global population, about two-thirds of the adults aged 18 to 64 years surveyed see themselves as entrepreneurs in pursuit of opportunity and one-third see themselves responding to necessity. However, the prevalence of these two different types of entrepreneurs differs greatly according to the opportunity structure within which people are located. Countries with low per capita income have high rates of necessity entrepreneurship.²⁰ In Argentina, in response to the economic downturn, the rate of necessity entrepreneurship doubled between 2001 and 2002, more than offsetting the decline in opportunity entrepreneurship.²¹ However, many of these same countries also have high rates of opportunity-oriented entrepreneurs, especially Thailand and India with 15 and 12 persons per 100 respectively (see Table 1).

The distinction between opportunity oriented and necessity driven entrepreneurship makes a difference in terms of expected outcomes? Opportunity-oriented entrepreneurs are much more likely, over two-thirds, to say they expect this level of job creation compared with necessity-driven entrepreneurs, of whom less than a third had the same expectations.²² Other important differences in expectations are also evident in relation to export markets, and creation of new markets or services.²³

Table 1 : Prevalence of type of entrepreneurship in middle and low-income countries, 2002, persons per 100 adults aged 18 to 64 years.

	Total Entrepreneurial activity	Entrepreneurs by necessity rate	Entrepreneurs for opportunity rate
Thailand	189	3.4	15.3
India	179	5.0	12.4
Chile	15.7	6.7	8.5
Korea	14.5	4.1	8.6
Argentina	14.2	7.1	6.8
Brazil	13.5	7.5	5.8
Mexico	12.4	2.7	8.3
China	12.3	7.0	5.6
South Africa	6.5	2.4	3.3

²⁰ Mary-Lyn Foxcroft Eric Wood Jacqui Kew Mike Herrington Nick Segal, 2003 Global Entrepreneurship Monitor 2002: South African Executive Report. Centre for Innovation and Entrepreneurship, Graduate School of Business, University of Cape Town, p 5

²¹ Reynolds, P, 2003 'The Entrepreneurial Spirit : What is Special about Latin America?', presentation to Instituto Panamericano de Alíya Direccion de Empresa [IPADE] Claveria, Mexico D.F.2 April

²² Reynolds, P; et al; 2002, Table 4, p 13.

²³ Ibid.

Another related important distinction about type of entrepreneurs which highly both highly relevant to developing countries and to the nature of the assistance that needs to be provided. This is the distinction the GEM 2002 Survey in South Africa makes between whether the entrepreneur is operating in the formal sector or the informal sector.

The South African GEM 2002 Report discusses the results of a supplementary representative sample survey about the different types of entrepreneurs in South African Townships, described as 'a traditionally black area within commuting distance of an urban metropolitan area'.²⁴

The focus of the survey was on township businesses that are defined as 'small, very small or micro business operating within a township'.²⁵ The survey found that the average number of employees in a formal (registered) township business is 7.2, compared with an average of 0.8 employees in an informal township business.²⁶ The conclusion drawn from this finding is that support efforts aimed at improving the prospects for job creation should focus on the former:

To address the objective of maximising job creation, more resources should be targeted at formal entrepreneurs rather than informal entrepreneurs in the townships. The informal sector remains enormously important in generating self-employment income for a large number of low-income households but is not generally important in the creation of employment for others.²⁷

The national surveys results also show that most entrepreneurs aim not to work with new technologies or operate in new markets. As many as 93 percent of entrepreneurially active adults see their business to be a replication of an existing business activity. This means that they are working with a familiar product or service, they are operating in a competitive market and that the technology they are using has been available for more than a year. Only a small minority (7 percent) expect their new firms to create a significant new market niche or economic sector. Only one per cent of the entrepreneurs surveyed expect to create new market niches, provide 20 or more jobs in five years, and have exports outside their own country.

²⁴ Profiling South Africa's Township Entrepreneurs', Chapter 6: in Mary-Lyn Foxcroft Eric Wood Jacqui Kew Mide Herrington Nick Segal, 2003, Global Entrepreneurship Monitor 2002: South African Executive Report. Centre for Innovation and Entrepreneurship, Graduate School of Business, University of Cape Town.

²⁵ Ibid, p 28.

²⁶ However, only 12 per cent of the businesses surveyed were formally registered, *ibid.*, p 29.

²⁷ Ibid, p 30

What place for high potential ventures?

What are the characteristics of the small number of 'high potential, innovative' ventures identified in the 37 countries (just under 10 per cent of the 9,615 enterprise of all enterprise start-ups). Compared with all other new ventures, entrepreneurs setting up 'high potential' ventures are more likely to be men (71 percent versus 59 percent), and 63 percent are younger than 35 years old.²⁸

In addition, 50 percent of the entrepreneurs associated with high potential new ventures had university or postgraduate experience (compared to 23 percent of all other new ventures), two-thirds came from the upper third of their countries' household income distribution (compared to one third for all other new ventures), and 5 percent did not have full or part time work (compared to 13 percent for all other new ventures). High potential ventures are more likely to be concentrated in manufacturing, wholesale and business service sectors.

Analysis of the survey results shows that 'high potential ventures' (but not entrepreneurial activity in general) are strongly correlated with:

- market openness (i.e., an entrepreneurial firm's access to markets and the quality of anti-trust legislation)
- primary and secondary education's support for entrepreneurial attitudes,
- population-level capacity and skills for entrepreneurial ventures,
- quality of intellectual property protection regime,
- quality of national support programs for entrepreneurial companies, and
- support for female entrepreneurship.²⁹

These results strongly suggest that high potential ventures are a distinct type of entrepreneurial activity that require special conditions to foster it. These conditions which are most often associated with high-income countries with substantial research and development infrastructures. Programs which aim to support high-tech entrepreneurship are not appropriate for other forms of entrepreneurship and are likely to be a waste of resources if offered in low and middle income countries.³⁰

²⁸ Ibid, p 57 ²⁹ Ibid, p 22.

³⁰ Ibid, p 38.

Barriers to success as an entrepreneur

The barriers to success in relation to both young people becoming entrepreneurs and the use of ICT need to be recognised and taken into account. In relation to entrepreneurship, for example, lack of access to credit is often the major problem but not in all cases. South African Survey of Township Businesses showed that over half of formal (ie registered) businesses did not report lack of finance as a major problem. Other major problems identified were lack of own transport, competition, theft, unavailability of electricity and lack of business skills. Lack of a means of communicating with suppliers or customers as well as transport may be important barriers to operating a business.³¹ Lack of knowledge about basic business practices may also be a major barrier to success.³²

Significant differences are likely to exist between informal and formal sector entrepreneurial activity in terms of the barriers to success. The former may require support which is focused on improving basic education levels, access to micro credit and access to transport to enable bulk buying. On the other hand, formal sector businesses are likely to benefit from small business support such as access to business premises backed by minimal services such as good transport and communications infrastructure.³³

The barriers to success in relation to ICT also need to be addressed. These are likely to be many, particularly if the country has a per capita income level below \$US9,000. At a minimum, countries with a low per capita income will need to demonstrate that they can demonstrate that they have achieved a certain threshold of e-readiness. One aspect of this readiness is evidence of government support in the form of a national ICT strategy and an implementation agency. As the Government of Mozambique has noted, it requires an integrated approach, encompassing human resources, infrastructure, business, government, legal and regulatory frameworks, and content/applications, with particular emphasis on the synergy among these elements.³⁴

³¹ The South African Township Business Survey showed that 83 per cent of formal businesses had cell or mobile phone, but only 42 per cent of the informal business had one. Two-thirds of the formal businesses had a line land but only a third of the informal businesses. Only 35 per cent of formal businesses had a computer but this was much more than the 3 per cent of the informal businesses. Still fewer township businesses has access to the Internet (15 per cent of formal businesses and 1 per cent of informal businesses).

³² Over half of the formal and informal township businesses surveyed in South Africa (59 and 55 per cent respectively) said they needed training in how to keep financial records.

³³ *Ibid*s, p 38.

³⁴ See Box 3

Thailand, for example, with a gross national income per capita of US\$1,940 in 2001 (with the ranking 105 out of 208 countries and defined by the World Bank as a lower middle-income country) has put in place a range of national policies to foster ICT (see Box 2).

Box 2: Time for Delivery: integrating ICT in Development Programs in Thailand

Since 1998 a number of key ICT-related laws have been put in place, and an ICT Master Plan has been adopted. A Ministry of Information and Communication Technology was created in October 2002 to lead Thailand's ICT development. This includes not only hardware, infrastructure, software and content development, but, just as importantly, "people-ware" development.

Strong emphasis is being placed on including all in the benefits of ICTs by providing help for the sick and disabled, using ICTs to disseminate cultural information, developing and making available assistive technology, and even providing ICT opportunities for prison inmates. ICTs are also helping to widen access to quality education and global content through initiatives such as SchoolNet Thailand. Through these efforts, combined with political will and leadership and participation of all sectors of society, Thailand is making progress towards its goal of being a knowledge-based learning society.

Source: Summary of keynote address to the e Joint OECD Joint OECD/UN/World Bank Global Forum: Integrating ICT in Development Programs by Ms Pensri Guntasopari, Director, Policy and Planning Division, National Electronics and Computer Technology Center (NECTEC), Thailand, April 4-5, 2003

However, low income countries are not necessarily excluded from making good use of ICT. Mozambique, for example, has a gross national income per capita income of only \$US 210 in 2001, giving it the low rank of 194 out of 208 countries. After long period of preparatory work, an implementation strategy has been put in place in 2002 to use ICT in a range of ways to reduce poverty.

Box 3: ICT Policy for National Development - Mozambique

Ms. Lidia Brito, Minister of Higher Education, Science and Technology, Mozambique, described how even a very poor country like Mozambique sees the need to address ICTs as a tool in poverty eradication, through an integrated approach. She described the concern of many people in government that there was insufficient synergy between the government's national development plans and the growing ICT initiatives in the country.

A high-level National Commission that began its work in 1998 and culminated in the approval of an implementation strategy in 2002, devised through broad consultation a comprehensive approach to using ICTs as a key tool in the war against poverty in Mozambique by building a knowledge society. This includes: guaranteeing all citizens access to the benefits of global knowledge; improving governance and public administration; making Mozambique a relevant and competitive partner in the global information society; and making Mozambique a producer, not just a consumer, of information and communication technologies and knowledge.

Implementation of the strategy - with an integrated approach covering human resources, infrastructure, business, governance, legal framework and content - will take from 2001 to 2005. It requires an integrated approach, encompassing human resources, infrastructure, business, government, legal and regulatory frameworks, and content/applications, with particular emphasis on synergy among these elements. Achieving the goals of the strategy will require: co-operation among all stakeholders; an implementation program that covers the whole country; effectively mobilising resources - both human and financial - to ensure timely and successful implementation; and engaging international partners including business partners.

Source: Summary of keynote address to the e Joint OECD Joint OECD/UN/World Bank Global Forum: Integrating ICT in Development Programs by Ms. Lidia Brito, Minister of Higher Education, Science and Technology, Mozambique.

Programs to support ICT based entrepreneurship

There appear to be few programs that support ICT-based entrepreneurship in general in developing countries. The OECD's Summary Matrix of Donor Information and Communication Technologies Strategies, dated February 2003, offers only one reference to a support program for entrepreneurship: the Enablis program, funded by Industry Canada.³⁵

A search of World Bank-funded projects reveals only one project that mentions youth, ICT and business – the E-Business for Small Business Development Project in Mexico, approved 31 July 2003.³⁶ Another source list, the WSIS list of accredited programs, refer to only two programs related to youth entrepreneurs.³⁷ These are: Junior Achievement of

³⁵ <http://www.oecd.org/dataoecd/53/55/24999900.pdf>, p 7

³⁶ One aspect of the project is to promote the employment of urban at-risk youth, Through ICT-based training, and job placement. www.worldbank.org

³⁷ <http://www.geneva2003.org/wsis/documents/SO3-WSISPC2-DOC-00091:MSW-E.pdf>

Nigeria; and Junior Enterprise International in Mali Association and Jeunesse Action (AJA) Mali.

Another initiative which aims to mobilise the technological, entrepreneurial and professional expertise and resources of the African Diaspora to support ICT- based entrepreneurship in Africa is The Digital Diaspora Network – Africa.³⁸ The Technology Business Development Network of Kenya (c4IDEA.com) is an online resource centre for a technology business development network that seeks to link entrepreneurs, interns, mentors, investors, and incubators with each other.³⁹

In relation to support for youth entrepreneurship, the Youth Business International network of accredited and affiliated associations has already been noted but will be further discussed below. The Friends of Africa Foundation aims to help young Africans (up to the age of 30) to develop sustainable livelihoods through skills, enterprise and leadership training and practical support for young entrepreneurs.⁴⁰

The Innovation Hub in South Africa seeks to create jobs and build technology competence through investment in people and indigenous intellectual property.⁴¹ ‘Youth in Business Centres’ in The Bahamas and Barbados have helped young men and women explore credit options and financial management programs and assist in marketing, product development and access to a wide array of books, manuals, video tapes and other materials related to starting and maintaining a small business.⁴²

The Global Education Partnership works in enables students to ‘learn how to start their own businesses, compete for high-wage employment, and become socially conscious participants in local development’. The program operates in the San Francisco Bay Area, Kenya, Guatemala, Tanzania and Indonesia.⁴³

Other relevant programs related to youth entrepreneurship with or without an ICT focus in high-income countries are also worth closer scrutiny. These include Academos, an online mentoring program whose objective is to stimulate and facilitate career exploration among youth in Canada.⁴⁴ The ‘Community of One’ Program is described as a youth business partnership that offers training programs for youth interested in entrepreneurship.⁴⁵

The Centre for Entrepreneurship Education and Development (CEED) in Nova Scotia, Canada, delivers a suite of successful programs aimed at cultivating and directly assisting youth entrepreneurs. The Toronto based online TakingITGlobal Business and Entrepreneurship network YouthBiz has 988 members world wide.

Quisique do Investidor? conducted by Portugal’s Youth Foundation, aims to help young entrepreneurs deal with the ‘red tape’ required to establish an enterprise and to identify business opportunities through better access to world markets.⁴⁶ One way this is done is through partnership arrangements with international companies. The use of experienced business people as mentors is another feature of the program.

Slingshot is an Australian-based program to help young people aged 18-24 into self-employment.⁴⁷ Slingshot offers support and assistance to young people by providing accredited training in business studies, mentoring from business people,

networking opportunities, access to low interest loans, product demonstration support, access to office facilities and project team support.

This overview of readily identifiable projects based on information on the World Wide Web suggests that there are few dedicated programs in or oriented to developing countries that focus on youth, ICT and entrepreneurship. The following section looks more closely at four programs that offer a basis for identifying critical success factors for ICT-based entrepreneurship for young people.

However, one prominent example of a program that seeks to provide access to high- income markets for the young self-employed in developing countries is Orphan IT

Orphan IT and GLOW (Global Learning Opportunities on the Web) ICT Centres

www.OrphanIT.com is a not-for-profit online social business venture that employs young people including orphans and other poor young adults in developing nations to provide IT services for online businesses in high-income countries. OrphanIT is a marketing firm that offers clients in high income countries web development services using the skills of young adults trained at computer learning centres in low and middle income countries. Its aim is to generate new business-to-business (B2B) markets linking developing and developed countries.

Orphan IT acts as a broker or intermediary to offer simple IT work via its Jobs Gateway portal to graduates of its designated learning centres. The online Jobs Board will offer work to students, graduates, teachers and coordinators in ICT Computer Telecentres (see Figure 1 below). The work can cover programming and coding, bulk scanning and data entry, transcriptions, log analysis & relationship marketing press releases, e-commerce & payment gateways, site research, copywriting and the preparation of databases.

³⁸ <http://www.ddh-africa.org/>

³⁹ http://www.c4idea.com/press/200307_new_teci_centre/hnn

⁴⁰ <http://www.friendsofafrica.net/>

⁴¹ <http://allafrica.com/stories/200210100758.html>

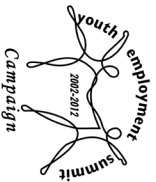
⁴² <http://www.iol.org/public/english/region/astro/bangkok/confy/youth/links/links.htm>

⁴³ <http://www.geponline.org/>

⁴⁴ <http://www.academos.qc.ca/>

⁴⁵ <http://www.ibsa-inc.org/one1/hnm>

⁴⁶ <http://www.fjuventude.pt/programas/sites/quiosque/>



The type of work commissioned could range from the simple and straight forward tasks using the latest release (1.1) of the free Open Office suite (www.openoffice.org). An example of these sorts of tasks could be the preparation of a graphics-rich and animated PowerPoint presentation based on a simple set on instructions as to what was wanted. Other tasks might include the use of the Open Office spreadsheet function 'DataPilot' to analyse survey data such as a marketing survey.

Two training facilities in Manila in the Philippines and in Chennai in India are linked to OrphanIT. The first pilot GLOW centre was opened in March 2001 in Manila.⁴⁷ Young people are paid an average of US\$5 per hour to produce web pages. More than 2000 hours of paid commercial work has been commissioned. There is a waiting list of over 20 clients wanting to hire our OrphanIT.com graduates. Orphan IT's target over the next two years is 'to channel US\$1,000,000 of new business to 10 ICT computer centers from 100 customers, creating over 500 jobs

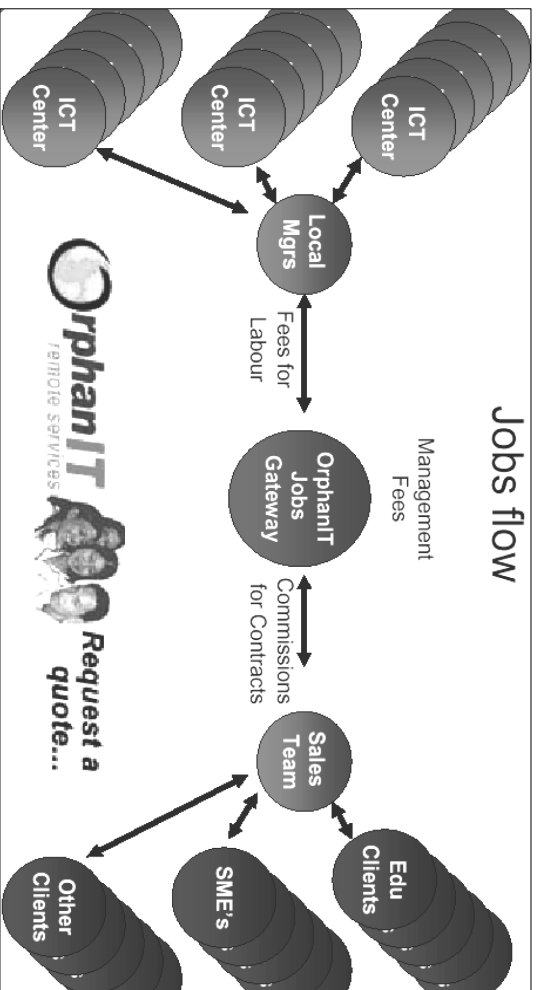
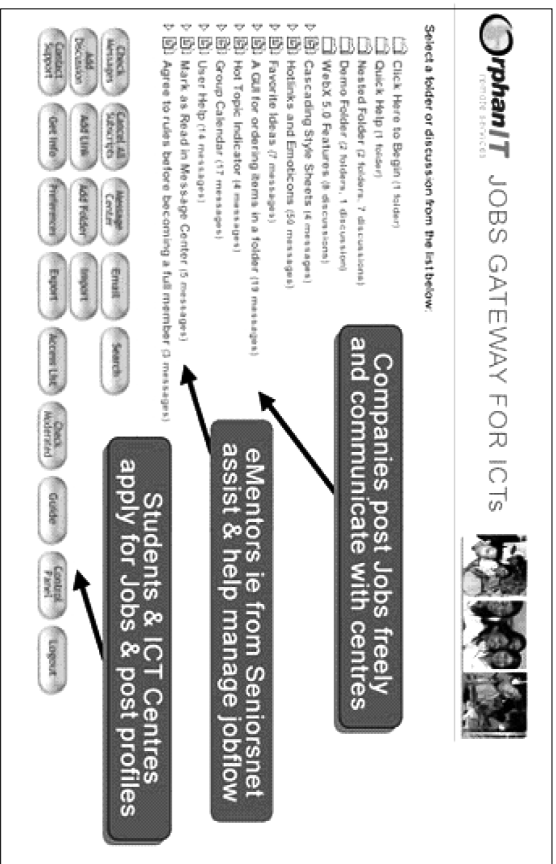
The project has received an award in the Global Junior Challenge and mentioned as a good example of a successful remote services businesses in an article entitled 'Serving the world's poor profitably' by CK Prahalad in the Harvard Business Review:

Now, thanks to the rapid expansion of high-speed digital networks, companies are realizing even greater savings by locating such Companies realizing savings locating labour-intensive functions such as call centers, marketing, and back-office processing in developing areas. eg. the nearly 20 companies that use OrphanIT.com's affiliate-marketing services, provided via its telecenters in India and the Philippines, pay one-tenth the going rate for similar services in the US or Australia.

⁴⁷ <http://www.slingshot.org.au/>

⁴⁸ Sponsors of the telecentre are Hyperstudy.com, EdMedia-information, Opportunity International, CCT (PI) Intel, Gold Sachs, Objective Group, Leading Australian education providers and You!

Figure 1: How the Community Jobs Gateway will work



Strengths and weaknesses

The OrphanIT model addresses what is often a major barrier for poor people in developing countries – how to access high income markets. The OrphanIT Gateway offers the means of linking the services of young people in low and medium income countries with markets in high-income countries through the medium of ICT. The link involves matching the needs of cost-conscious small businesses seeking to make use of online services to the services offered by young people with the requisite ICT skills.

OrphanIT is the front-end marketing operation that offers not only a mechanism for job matching (a jobs gateway portal) but also the right context or environment to facilitate the transaction. The context of ‘helping the poor and disadvantaged’ is an important motive to encourage customers to use the services of young people at ‘arms length’ in other countries.

The right context highlights the mutually beneficial nature of the exchange. The seller of the service gets work at a rate of pay that he or she could not get domestically. The buyer is able to purchase a service at a rate that he or she is prepared to pay. The emphasis in the exchange, therefore is on ‘trade, not aid’ – in other words, young people in developing countries are not receiving charity but are being paid for an export which is the product of their skills in computer software development.

The type of entrepreneurship being fostered in this model is one based on necessity. It is perhaps better described as self-employment. It is a form of employment that requires considerable support from an intermediary to survive. This support is most likely to involve continued access to the training centre’s reliable hardware and appropriate software needed to undertake the commissioned work. The upside of this model is that the young person does not need to fund the cost of entry to this market. The only investment required is the young person’s time and application to acquire the skills needed in the first place.

However, the young person is not limited to self-employment as the only option. With sufficient savings, he or she may wish to purchase their own computer and appropriate software and thus compete for work directly without having to pay for access to the training centre’s facilities. With a number of projects completed and the commendations of happy customers, the transition could be made from self-employment as an individual to the start of an independent business.

The weaknesses of the model, however, also need to be addressed. One is the reliability of the intermediary. This applies to not only the quality of the ICT training provided by the intermediary. Fundamental to the longer-term viability and scalability of the model is having in place the systems to manage the workflow of the commissioned work and to handle the subcontracting relationship. Some form of external accreditation of the training, software development processes and management systems is most likely to be needed to enable the model to be scaled up to operate beyond a pilot stage. Providing the quality assurance framework.

Direct support for individuals is also likely to be needed. This can be achieved through assistance provided by mentors.

OrphanIT notes that they are working to develop relationships with communities like SeniorsNet and Third Age to provide ‘arms-length’ mentor-professional services for the ICT centre graduates by email or voice over Internet connections. The establishment and maintenance of such a network is likely to be a resource-intensive project in itself, requiring a separate allocation of funding. It will require a third party facilitator to manage the one-to-one mentoring relationships.

Separate funding is also likely to be needed to operate an accreditation process that is vetted by a third party. A social franchise model is one option. This would need to involve specification of a set of services to be provided by the Lead body such as marketing and branding internationally, fundraising and developing suitable support networks. The responsibilities of the service agency will also need to be specified and should include the maintenance of hardware and software and the types and extent of support to the self-employed ‘jobbers’.

Conclusion

This paper has highlighted several important considerations related to promoting opportunities to create employment for young people, using ICT. The first is the need to distinguish between self-employment and entrepreneurship as two separate activities requiring different skill sets and forms of support. Self-employment is the focus of most young people in the informal sector. The main need for the self-employed is to generate enough income to survive. So how to manage money and to save the small surplus generated are the soft skills required for this form of employment to become viable. Entrepreneurship, on the other hand, requires a more complex set of skills from marketing to managing cashflow. More extensive training is required to enhance these skills.

ICT does provide a valuable way to create a supply of skills that are in demand. However, considerable attention needs to be given to how to gain access to high-income markets. This is the particular strength of the OrphanIT model of linking the ICT related needs of small business in high-income countries with the skills of young people in middle and low-income countries. The issue that still needs to be addressed is the management of quality control for the work produced by young people. A mechanism is needed whereby a third party can vet and vouch for the quality of the work produced by young people for high-income markets.