

Good Practice Paper on ICTs for Economic Growth and Poverty Reduction

Abstract. This report aims to give an overview of what DAC members currently know about how Information and Communication Technology (ICT) use in developing economies can stimulate economic growth and poverty reduction. It draws attention to the cross-cutting applications of ICTs, to their role as tools, not goals, and links their use to development co-operation. The report presents three key discussions. Chapter 2 considers the contribution of ICTs to pro-poor growth. Chapter 3 discusses the contribution of ICTs to the Millennium Development Goals, drawing attention to the processes that lead to the goals. Chapter 4 looks specifically at poverty-reduction good practice and relates what is currently known to the role of ICTs. It is hoped that this text will clarify the debate on the role of ICTs, and give a framework for extending the discussion so that ICTs may find their rightful place in development co-operation.

Acknowledgements: This report was prepared by Mr. Simon Batchelor and Mr. Nigel Scott, Gamos Ltd, with inputs from Mr. David Woolnough currently with the ICD team of UK Department for International Development (DFID). The project was initiated and co-ordinated by Mr. Ichiro Tambo, Adviser on Science and Technology, OECD's Development Co-operation Directorate. It was funded by the Government of Japan and the Japan International Cooperation Agency (JICA). It draws on many works published by OECD-DAC members and thanks are extended to all contributors. In particular, Chapter 4 draws significantly on a consultation of DAC members, the work undertaken during 2004 by Mr. Benoit D'Ansembourg, then independent ICT consultant. Any comments or queries regarding this paper should be addressed to <dac.contact@oecd.org>.

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Foreword

There is considerable debate about the role of Information and Communication Technologies (ICTs) in economic growth and poverty reduction.

Should ICTs be considered only as a sector within infrastructure? A study of financing ICTs for development¹ clearly shows that ODA investment in ICT as infrastructure has declined over the last ten years, dropping from USD 1.2 billion in 1991 to USD 194 million in 2002. The private sector has heavily invested in ICTs as an infrastructure. How should the development community respond?

How should the development community work with ICTs for economic growth? Studies in the growth of the developed economies suggest that ICTs do have a strong role. But the conditions in developing countries are very different, and the link between cause and effect is still under debate.

How should the development community work with ICTs for poverty reduction? It is true that in many circumstances the use of ICTs can produce efficiencies in the service delivery sectors, and can improve the choice and opportunities for livelihoods. But there is a lack of clear data to inform the development community of the opportunities for efficiency, and to enable clear choices.

This good practice paper seeks to address these broad but difficult questions. It aims to give an overview of what DAC members currently know about how ICT use in developing economies can stimulate economic growth and poverty reduction. It draws attention to the cross-cutting applications of ICTs, to their role as tools, not goals, and links their use to development co-operation. It is hoped that this text will clarify the debate on the role of ICTs, and give a framework for extending the discussion so that ICTs may find their rightful place in development co-operation.

This report was prepared with inputs from more than 50 ICT experts and advisers within aid agencies including UNDP and the World Bank. It went through a series of meetings and consultations. The result of these collaborative efforts represent a fairly comprehensive overview of good practices as observed by ICT and development practitioners throughout the world.

To help advance this, the Government of Japan and Japan International Cooperation Agency (JICA) made a special grant to the Development Co-operation Directorate (DCD) to fund the project. It was co-ordinated by Mr. Ichiro Tambo, Advisor on Science & Technology, Development Co-operation Directorate, and prepared by Mr. Simon Batchelor and Mr. Nigel Scott, Gamos Ltd., with inputs from Mr. David Woolnough currently with the ICD team of UK Department for International Development (DFID).

Since there is little current literature dealing with this issue, we have decided to publish the report in *The DAC Journal*. Beyond its initial audience in aid agencies, I hope this publication will be of interest both to scholars and to general readers interested in development.

¹ OECD (2005), *Financing ICTs for Development: Efforts of DAC Members – Review of Recent Trends of ODA and its Contribution*. Development Assistance Committee (DAC), Paris. Available online at, www.oecd.org/dac/ict.

I thank all the DAC members who provided first-hand information on their experiences and directly or indirectly contributed to this report.



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*In order to achieve its aims the OECD has set up a number of specialised committees. One of these is the **Development Assistance Committee**, whose members have agreed to secure an expansion of aggregate volume of resources made available to developing countries and to improve their effectiveness. To this end, members periodically review together both the amount and the nature of their contributions to aid programmes, bilateral and multilateral, and consult each other on all other relevant aspects of their development assistance policies.*

The members of the Development Assistance Committee are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, the United States and the Commission of the European Communities.

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Acronyms

ADB	Asian Development Bank
CIDA	Canadian International Development Agency
CDPF	Country Development Programming Framework
CPRGS	Comprehensive Poverty Reduction and Growth Strategy
CTO	Commonwealth Telecommunications Organisation
DAC	Development Assistance Committee
DFID	UK Department for International Development
EC	European Community
GKP	Global Knowledge Partnership
ICD	Information and Communication for Development
ICT	Information and Communication Technology
ICT4D	Information and Communication Technology for Development
IDRC	International Development Research Centre
IFC	International Finance Corporation
IICD	International Institute for Communication and Development
<i>InfoDev</i>	World Bank's Information for Development Program
IT	Information Technology
ITU	International Telecommunication Union
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
LLDCs	Least among Less Developed Countries
MDGs	Millennium Development Goals
MSPs	Multi-stakeholder partnerships
NGOs	Non-governmental organisations
NICI	National Information and Communication Infrastructure
NORAD	Norwegian Agency for Development Cooperation
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
POVNET	OECD-DAC Network on Poverty Reduction
PPG	Pro-poor growth
PRSPs	Poverty Reduction Strategy Papers
SDC	Swiss Agency for Development and Co-operation
SLF	Sustainable Livelihoods Framework
Sida	Swedish International Development Agency
SME	Small and medium-sized enterprise
USD	United States dollar
USAID	United States Agency for International Development
UNDP	United Nations Development Programme
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WSIS	World Summit on the Information Society

NB: It should be noted that different donors tend to use different acronyms. Japan prefers to use IT, DFID (United Kingdom) uses ICD, and SDC (Switzerland) uses ICT4D. In this publication we have tended to use ICT or ICTs except where there was a particular reason to draw on a different acronym.

Executive Summary

This report aims to give an overview of what DAC members currently know about how Information and Communication Technology (ICT) use in developing economies can stimulate economic growth and poverty reduction. This publication outlines the importance of a broader view of ICTs in development co-operation.

There is a growing body of evidence linking investment in ICTs to economic growth, but little convincing evidence on the links to pro-poor growth. To understand the link between ICTs and pro-poor growth more data are required. National planning processes should be encouraged to include an analysis and comment on the role of ICTs, not only as a sector within the economy, but on their uptake as complementary factors in pro-poor infrastructure, private-sector development, and in rural livelihoods. Donors should pay more attention to an enabling pro-poor environment in ICT-related regulations and policies.

ICTs can also help in the achievement of the Millennium Development Goals through three basic processes: enhancing livelihoods, improved efficiency in the delivery of services, and allowing local stakeholders a voice in the planning process. ICT advances brought about by the private sector can also complement initiatives undertaken by government or development-cooperation agencies. Two factors will be vital in allowing these benefits to unfold: the development of capacity in ICT use; and the generation of suitable content, established not by the ICT sector but by the lead sector in question – health, education, governance.

This report draws on the responses of DAC members to requests for ICT “lessons learned” and “good practice”. Members agreed that in ICT, as with all development co-operation, success or failure depends more on developmental processes rather than the specifics of the co-operation. Integrating ICTs into development co-operation must follow the basic principles of development co-operation good practice. The DAC Guidelines *Poverty Reduction* give the background against which the integration of ICTs into development cooperation should be considered.

The practical experience of DAC members suggests a raft of approaches – among them a variety of different partnerships – to ensure the efficient incorporation of ICT considerations into planning processes. The integration of ICTs in itself will not provoke adherence to poverty reduction good practice, but ICTs can support good practice. It is particularly suited to the practice and processes surrounding ownership and participation.

As the development of ICTs continues at a rapid pace, the development community will face ongoing challenges regarding the integration of ICTs into development co-operation. There are dangers regarding the distraction of resources, and the provision of technology without capacity. There are opportunities for improved ways of working, and for making cost-savings through improved efficiencies. As the development community considers how to mainstream ICTs in its development co-operation the focus of the question “How can ICTs be integrated into development co-operation?” should now be “How can ICTs support development co-operation good practice?”

To the ICT enthusiast, the recommendations are:

- More data are required on the impact and effectiveness of using ICTs to support to pro-poor growth (PPG) and the deliver of pro-poor services.
- The efficiencies and increased effectiveness in mainstream development co-operation that ICTs can provide has to be demonstrated, particularly where they are competing for scarce resources.
- When considering the introduction or extension of ICTS, it is the potential impact on pro-poor growth or on the processes which lead towards the MDGs that have to be presented and discussed, not the development of ICT infrastructure *per se*, or ICTs as a goal in themselves.
- Programmes seeking to integrate ICTs in development co-operation must adhere to good-practice principles on ownership and participation, co-operation and collaboration, and capacity-building, if they are to have any measure of success.
- Co-operation with the private sector is particularly pertinent for increasing ICT access, although synergies with other sectors should also be sought.
- The user interface should be matched to the clientele capacity, and the relevancy of content ensured, whatever the ICT used.

To the donor, government or development practitioner, especially those yet to be convinced about the role of ICTs, the recommendations are:

- The impact and effectiveness of using ICTs to support PPG and the deliver of pro-poor services should be continually assessed – rapid changes in ICTs can offer new ways of working.
- There should be continual assessment of whether ICTs can produce efficiencies and increase effectiveness in mainstream development co-operation, particularly where there are scarce resources and ICTs may create savings.
- ICTs will have an increasing role in the practice of development co-operation by virtue of their increasing role in day-to-day life and so should not be ignored – they will increasingly impinge on the life of the poor.
- Development co-operation seeking to adhere to good-practice principles should consider how ICTs can support and enhance practices such as ownership and participation, co-operation and collaboration, and capacity-building.
- Co-operation with the private sector is particularly pertinent for increasing ICT access, but synergies with other sectors should be sought.
- Planning tools – such as the PRSP process – should include an analysis of the role of ICTs in poverty-reduction, and seek to put in place a positive enabling environment.

For the development community to take advantage of the new opportunities offered by ICTs, the community must keep a view that includes the wider picture – not the specifics of this technology or that channel of information but of the developmental processes known to be good practice.

Chapter 1

Introduction

In March 2002 seven members of the OECD Development Assistance Committee (DAC) established their policy and/or strategy paper on Information and Communication Technologies (ICTs) for Development (ICT4D)². By March 2005 almost half of DAC members had such documents in place, and all members have an “ICT4D” – ICTs for development – focal point within each agency. They also have mainstreamed ICTs into their development programmes, although there is a disparity among early adopters and newcomers.

Box 1. Defining information and communication technologies (ICTs)

While the common use of ICTs tends to refer to the newer technologies of phone and internet, the term ICT is best used to also include the more traditional communication media such as radio and television. Digital convergence is gradually bringing devices to the market that include the traditional media (phones with radio, media centres with computing capability and television) which will increasingly blur the distinction between old and new ICTs.

This report presents state-of-the-art knowledge of the integration of ICTs in development co-operation. It is a discussion of the contribution of ICTs to economic growth and poverty reduction, deriving from current experience some basic guiding principles for “good practice” regarding ICTs in development co-operation.

A common theme throughout the report is that, just as poverty is multidimensional, so too is the role of ICTs. ICTs are not an end in themselves but a means or mechanism that can make a significant contribution to the fight for poverty reduction. ICTs cannot solve poverty on their own, but they can make a contribution to the processes that lead to achieving the Millennium Development Goals (MDGs). The economy and pro-poor growth (PPG), as well as the processes of development co-operation and development intervention. The precise contribution and the impact of that contribution will vary considerably depending on the specific local circumstances.

The initial two chapters of this report discuss how ICTs contribute to PPG and to achieving the MDGs. They draw attention to how ICT infrastructure can play a role in PPG and the delivery of services which contribute to the MDGs. ICT infrastructure in itself may or may not contribute to the general economy. In spite of the lack of evidence, there is a growing consensus that ICT infrastructure leads to economic growth. Yet if we make an assumption that it does contribute to the general economy, we are left with the question of whether that economic growth will lead to PPG – but there is even less evidence and data to determine the contribution of ICT infrastructure to PPG. The

² In response to the request for information conducted by the OECD Development Co-operation Directorate in April 2002, it was found that seven members (EC, Germany, Japan, Norway, Sweden, United Kingdom and United States) had their paper on ICT4D, and that three members (Canada, Italy and the Netherlands) were in the process of finalising their draft.

consensus is that the ICT contribution to PPG is dependent not on the ICT infrastructure *per se* but on the role of ICTs in supporting pro-poor initiatives. The chapters demonstrate that the contribution of the ICT infrastructure is dependent on its integration with other pro-poor initiatives.

As far the fulfilment of the MDGs is concerned, experience has shown that ICT/technology-push projects are not the best contributions. MDG led development co-operation, pulling in ICTs where appropriate and efficient, will give more poverty impact. Part of this shift from “push” to “pull” will depend on mainstreaming, which will depend to a large extent on articulating ICT potential to different audiences. One of the difficulties is the barrier of insufficient information – questions over the actual impact of an ICT intervention, and of its potential to scale, replicate and to be sustainable.

The opening chapters therefore suggest that the development community has reached a basic understanding of ICTs as a tool for development, and that a prime challenge now is for DAC members to integrate ICTs in development co-operation with some good practice principles. Chapter 4 presents the current knowledge regarding integrating ICTs in development co-operation, and takes the view that it is difficult to publish a definitive text. Several factors conspire to suggest that DAC members do not yet have enough evidence to support the production of a “good practice guide”. These factors include the rapid pace of change among ICTs and the scattered experience of DAC members. What has been learnt so far by the ICT4D community is that ICTs are not a special case, and are subject to the same good practice principles as other development activities. This has an impact on integration into development co-operation in two specific ways:

- ICT enthusiasts or champions, who believe that ICTs can contribute to poverty reduction, must ensure that poverty-reduction good practice must be incorporated into any ICT initiatives.
- DAC members of any discipline, who are implementing development co-operation, should consider and assess the potential role of ICTs to support poverty reduction good practice.

The chapter draws on The DAC Guidelines *Poverty Reduction* to demonstrate how ICTs can support good practice in development co-operation. It summarises the guidelines as five key practices. A sixth practice or principle is added based on specific feedback from ICT pilots and experiences.

This is also a collaborative response and follow-up from the DAC members to the World Summit on the Information Society (WSIS) Plan of Action³ as stated below.

“D1. Priorities and strategies

b) ICTs should be fully mainstreamed into strategies for Official Development Assistance (ODA) through more effective donor information-sharing and co-ordination, and through analysis and sharing of best practices and lessons learned from experience with ICT-for-development programmes.”

Who should read this document

The report is intended for development practitioners, both those with ICT experience and those who are considering the use of ICTs in mainstream development activities.

For those who are enthusiastic about the potential of ICTs for promoting economic growth, targeting pro-poor growth and increasing the efficiency of development co-operation, the report will

³ See: www.itu.int/wsis.

encourage a wider view, a stepping-back to look at the whole picture. It calls on ICT champions to look at the processes of development – such as participation by all stakeholders, local ownership, capacity-building, planning, and monitoring and evaluation.

For those who do not naturally explore new ICT possibilities, and are focused on their mainstream work, the publication encourages the consideration of ICTs. These are changing rapidly and new ways of working are constantly arising. Efficiencies can be realised, and there are potential savings in cost-effectiveness. These opportunities do not substitute different objectives or purposes for development co-operation. They are potential new tools for fulfilling the agreed goals. There is considerable potential for ICTs to support developmental processes, and the report shows how ICTs can contribute to the MDGs and PPG, and how they integrate with development co-operation.

Method

This report is the outcome of a process starting from the turn of the century. The following OECD meetings, among others, constitute the key milestones of the process:

- Joint OECD-DAC/World Bank Workshop: “Using Information Technology to Promote Aid Effectiveness”, November 2000 in Paris.
- Joint OECD/UN/UNDP/World Bank “Global Forum on the Knowledge Economy: Exploiting the Digital Opportunities for Poverty Reduction”, March 2001 in Paris.
- Joint OECD/UN/World Bank “Global Forum on the Knowledge Economy: Integrating Information and Communication Technology in Development Programmes”, March 2003 in Paris.

This process has not been stand-alone and has constituted part of international platform for discussions, *inter alia*, such as the G8 Digital Opportunity Task Force (DOT Force) established by the G8 at their Okinawa summit in July 2000, the UN ICT Task Force which is the follow-up to bridging the digital divide as requested in the Millennium Summit Declaration and, of course, the whole process of the World Summit on the Information Society (WSIS).

It builds on the work of OECD Growth Project and its follow-up. Furthermore, it also builds on the related work of the OECD Development Assistance Committee (DAC) on “ICTs and Economic Growth in Developing Countries”, prepared by Mr. David Souter.

The report links with the work of DAC Network on Poverty Reduction (POVNET), including the Infrastructure for Poverty Reduction Task Team (InfraPoor Task Team) discussions. In particular, it draws on Ms. Susanne Hesselbarth’s work on infrastructure.

In the process of formulating the publication, consultations were made.

- DCD Seminar “A Dialogue on ICTs and Poverty: The Harvard Forum” and the following informal expert meeting, 7 July 2004 in Paris, supported by Canada’s International Development Research Centre (IDRC).
- OECD-DAC/SDC Bilateral Donor Agencies Meeting: “Knowledge and People-centred Communication: Potentials and Pitfalls for Poverty Reduction and Advancement of Millennium Development Goals (MDGs)”, and the following informal expert meeting,

1 September 2004 in Geneva, supported by the Swiss Agency for Development and Co-operation (SDC).

- Second Workshop of the InfraPoor Task Team, 27–29 October 2004 in Berlin.
- Workshop on ICTs and Poverty Reduction, 29 January 2005 in Accra, Ghana, as part of the Second African Regional Preparatory Committee Conference for WSIS, supported by the Republic of Ghana and coordinated by the UN Economic Commission for Africa (UNECA).

As acknowledged above, the report draws in particular on information collected through OECD DAC ICTs for Development (ICT4D) focal points network by Mr. Benoît D'Ansembourg during the months of July–September 2004, as well as the whole exercise of creation of and updates of the OECD-DAC Donor ICT Strategies Matrix, which was originally initiated by IDRC, starting from December 2000. The Matrix was published in February 2001, its second and current format in February 2003, its CD-ROM version with updates and all the donor documents in December 2003, and the most recent revision in July 2004.

Box 2. OECD-DAC Donor ICT Strategies Matrix

To encourage information sharing and co-ordination, the OECD/DAC produced a collection/directory of information on ICTs for development strategies and programmes of 23 bilateral and 25 multilateral donors.

This Matrix presents the latest information on how bilateral and multilateral donors have “mainstreamed” information and communication technologies (ICTs) in their development-assistance programme in order to achieve development goals – particularly the Millennium Development Goals (MDGs) – more effectively and efficiently.

The CD-ROM (December 2003 version), prepared as a contribution to the first phase of the World Summit on the Information Society (WSIS), is enriched with the inclusion of a large number of strategies papers and other related documents submitted by donors.

Each donor entry has formatted information on guiding principles and objectives (including areas of application), programmes (including participation in multi-donor programmes), regional focus, scale of financing, and contact/website details.

See: www.oecd.org/dac/ict

Chapter 2

The Contribution of ICTs to Pro-Poor Growth

Introduction

Poverty is widely recognised as multidimensional, encompassing food security, health, education, rights, security and dignity, among other elements. Although its resolution should also be multidimensional, we focus in this chapter on one of the key factors: economic growth, and pro-poor economic growth in particular. The following chapter, “The Contribution of ICTs to Achieving the MDGs”, discusses the broader dimensions of poverty. This chapter is intended to stimulate discussion regarding the contribution ICTs can make towards pro-poor growth.

ICTs and economic growth

What exactly is pro-poor growth?

In order to discuss the contribution of ICTs to pro-poor growth we need to establish a basic understanding of what the term means. Economists and agencies have various views on pro-poor growth and how it should be defined; alternative views are summarised in a paper by E. Pernia:⁴

Pro-poor growth has been defined variously. Some refer to it as growth that results in significant poverty reduction, thereby benefiting the poor and improving their access to opportunities (e.g. UN 2000, World Bank 2000, OECD 2001).

Others equate pro-poor growth with high elasticity of poverty with respect to growth (e.g. Ravallion and Datt, 2002). Ravallion and Chen (2003) also introduce the concept of “mean growth rate of the poor”, which seems analytically ambiguous. Pro-poor growth is the type of growth that enables the poor to actively participate in economic activity and benefit **proportionally more** than the nonpoor from overall income increase. This signals a clear departure from the trickle-down development notion of the 1950s and 1960s that meant a gradual top-down flow from the rich to the poor. Klasen (2001, 2) similarly defines “pro-poor growth to mean that the poor benefit disproportionately from economic growth.

This chapter does not address the relationship between economic growth and pro-poor growth, nor whether pro-poor growth can only occur in response to specific pro-poor actions. We do know, however, that some investments return a high yield in terms of pro-poor growth. In order to discuss the contribution of ICTs, and to avoid the details of the debate, we propose the following diagramme to give a framework for the discussion.

⁴ Pernia, E. (2003).

Figure 1. Contribution of ICTs to pro-poor economic growth

Pro-Poor Growth (PPG) diagram.

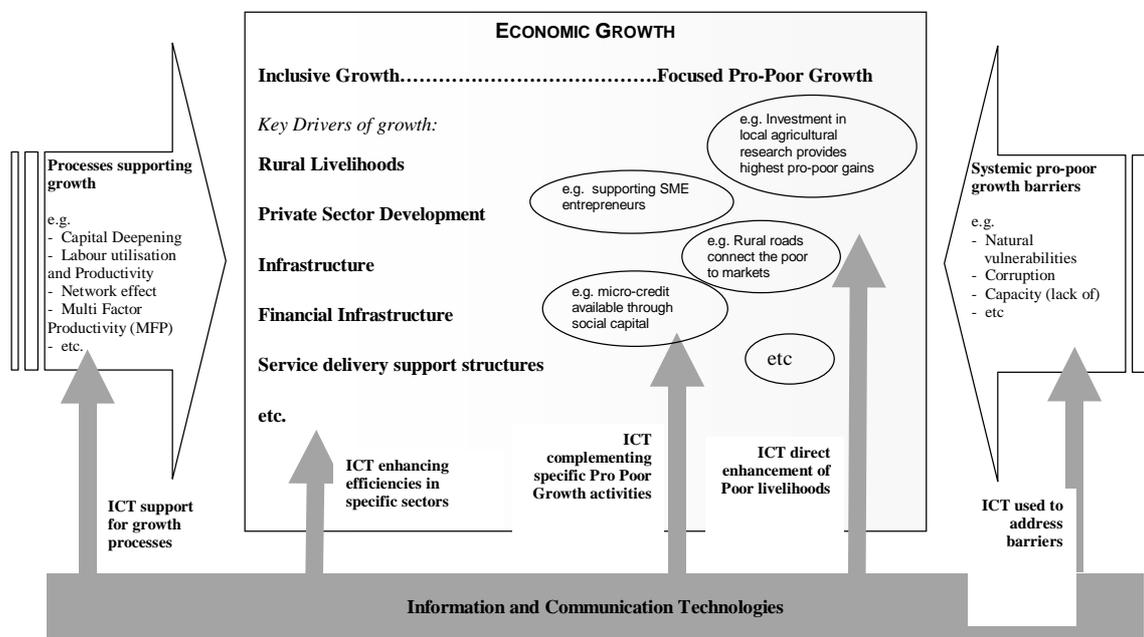


Figure 1 suggests that ICTs can make a contribution to economic growth, and in particular pro-poor growth by contributing to:

- Strengthening the economy in specific sectors, or play a role in specific processes that lead to economic growth.
- Specific pro-poor actions, or indeed to the livelihoods of the poor.

The impact of ICTs on macro-economic growth in developing countries has recently been addressed as a topic for research. If pro-poor growth is a sub-set of macro-economic growth, then it is important to understand the role of ICTs in macro-economic growth.

Reality check – growth is more likely than pro-poor growth

It is clear that ICTs can facilitate economic growth in more developed countries; OECD (2003b) identifies ways in which this has been experienced:

- The technological innovation and high volumes of demand generated by an ICT production sector.
- Use of ICTs throughout the value chain has contributed to multi-factor productivity.
- ICT investment has contributed to “capital deepening”.

Yet there are some doubts as to the relationship between cause and effect. Only in telecommunications does there seem to be a clear cause and effect.⁵ Souter (2004) notes differences in macro-economic context between developed and developing countries, the most significant of which may be that developing-country economies are largely based on the production of raw materials and subsistence agriculture, neither of which hold much promise for improved efficiency through the application of ICTs.

Some developing countries have proven that concentrating on ICT production and service sectors can help their economies grow, as adequately demonstrated by growth in Asia in the 1990s. Although in some cases this growth led to noticeable poverty-reduction, the poor can benefit proportionally less than the non-poor:

Analysis of global cross-national data shows that the incomes of the poor move proportionately one-for-one with overall average incomes (Dollar and Kraay, 2001). However, because Asia is so vast and diverse, its success story does not apply equally to all countries, nor can the results of crossnational regressions be taken at face value. The relationship between growth and poverty is highly country-specific, as exemplified by the analyses of subnational data for individual countries (Pernia 2001). These indicate that the poor typically gain less than proportionately from increases in overall average incomes, and that other factors (initial conditions and institutions) matter to poverty reduction besides their impact on growth itself.⁶

Thus, although some evidence suggests ICTs contribute to general economic growth, there is very little evidence to believe that the poorest countries will be able to utilise its potential fully in increasing efficiencies in its resource-based industries. There is also very little evidence to believe that the future impact of any ICT activities that encourage and affect general economic growth would be more pro-poor than current experiences – unless policies are introduced to ensure such an affect.

How do ICTs contribute to pro-poor growth (PPG)

ICTs are multidimensional

Box 3. ICTs as a tool

ICTs offer the potential to share information across traditional barriers, to give a voice to traditionally unheard peoples, to provide valuable information that enhances economic, health and educational activities. But ICTs are only a tool: pro-poor development must consider ICTs a means in the fight against poverty, not an end. Many of the genuinely “pro-poor” aspects of ICT-enabled growth may arise only indirectly.

Although economic growth may lead to pro-poor growth, many commentators believe that there have to be specific pro-poor activities. These interventions are specifically designed to reduce inequalities. How can ICTs contribute to these specific pro-poor actions?

⁵ Roller and Waverman (2003).

⁶ Pernia, E. (2003).

Several sectors can be regarded as prerequisites (or drivers) for economic growth (Figure 1). Those that have the potential to enhance pro-poor growth specifically include infrastructure, private-sector development (PSD) and rural livelihoods. ICTs tend to be complementary to existing practice within each of these sectors rather than substitute for them.

Complementarity of ICTs and other pro-poor infrastructure

The growth in infrastructure and the resulting connectedness (especially because of roads, but also thanks to electricity) has been shown to be an immensely important factor governing the growth in household income. Studies show that pro-poor growth can be found where infrastructure services help to enhance the productivity of the poor:

1. Market expansion and improvement (reduction of transaction costs).
2. Reduction of important dimensions of the risks that are inhibiting private investment in manufacturing and agriculture.
3. Reduction of the community and household risks from natural and man-made disasters, and health emergencies.
4. Contribution to empowerment (to a degree in the short term and especially for the long term), by providing inputs – of communication facilities and mobility, energy and water supply – that are essential for the spread of education and health services to strengthen the human capital of the poor.

ICT infrastructure also demonstrates these characteristics, for instance:

1. Access to market data can assist market expansion and reduce transaction costs.
2. Traders can reduce risk of overstocking by using ICTs to confirm supply and demand.
3. Emergency warnings by various media can substantially reduce risks.
4. The combination of rural roads and ICTs can lead to more effective responses to health.

Pro-poor growth, therefore, requires extension of infrastructure services to rural areas where the majority of the poor reside, often far from major centres of growth. Connecting such communities to the economy of a nation requires substantial investment in infrastructure which would be delayed, if not absent altogether, if poverty reduction were not a priority; that is, pro-poor growth typically requires more targeted investment in infrastructure. This holds true for ICTs, where extension of the telecommunication system to the rural poor must be actively encouraged by pro-poor policies. A group of experts claim that this is far from common practice: “If one looks at Africa the costs of access to ICTs will simply mean that there will never be ICT diffusion as it currently is. There is certainly a clearness that privatization on its own has not been a successful strategy. The lack of effective regulation, to give an extended private monopoly, has actually done many of our countries a great disservice.”⁷ There is a need for pro-poor policies that ensure the ICT sector covers rural areas.

Nonetheless, telecommunications is the only service which is proving profitable in remote rural areas. Recent evidence indicates that volumes of demand amongst rural communities is proving higher than initially expected, so additional investment in infrastructure is likely either to be profitable, or to

⁷ Harvard Forum (2004).

require less subsidy than expected.⁸ The development of new wireless technologies has led to the emergence of innovative business models that may prove effective in rural areas.

There is no evidence that ICT infrastructure can substitute for “traditional infrastructure” (roads, energy, water). On the contrary, ICT services can enhance the pro-poor value of traditional infrastructure: roads can open up access to markets for farmers, for example, and the use of phones can then enable them to select markets more efficiently and conduct remote transactions. Innovative approaches to linking ICT infrastructure expansion to other services are beginning to emerge; for instance, the Rural Communication Development Fund in Uganda is linked to the Energy for Rural Transformation project.

Box 4. The use of phones in rural Africa

The use of phones is no longer confined to the rich. For instance, although teledensity remains low in Ghana, Uganda and Botswana, research shows that over 80% of residents in typical rural districts have made at least one call in the last three months. This strategic use of the phone illustrates that the impact of ICTs on poor livelihoods will not directly correlate with indicators of access – the number of phones per hundred people. Similarly, the impact on the rural economy can be significant, even with a small number of phones per community. (McKemey *et al.*, 2003)

Market efficiency, private sector development and ICTs for PPG

As with infrastructure, private sector development can have a pro-poor emphasis. The focus will be on small and medium enterprises (SMEs). In a predominantly agricultural context, **productivity** depends upon flexible and efficient markets. SMEs are a key part of the private sector in developing nations and entrepreneurship is the basis of the necessary flexibility in the markets (although entrepreneurs frequently lack business-management skills, which is an important ongoing constraint). ICTs offer entrepreneurs new tools which can be used to improve flexibility and efficiency.

Business networks, especially clusters, are conduits of innovation and increase productivity through specialisation and flexibility. Virtual business clusters are made possible through the use of ICTs. ICT service industries can be fostered through incubator programmes, which tend to form part of national ICT strategies (the Mozambique Information and Communication Technology Institute [MICTI] in Mozambique is one example), although the impact of such incubators is often limited to better-educated people, rather than those who are overtly pro-poor. Donors are now gaining experience of how ways of working can be made specifically pro-poor. Decision-makers should nonetheless be realistic about the potential within their country for developing an ICT sector: “National strategies which seek to replicate the experience of Bangalore are likely to fail; those that focus on using ICTs to increase the productivity of established sectors in which a country has competitive advantage ... are more likely to succeed.”⁹

Risk and transaction costs depress **investment**, a driver of growth. ICTs have shown that they can reduce transaction costs, and they can also play a role in combating risk. Many market transactions include a risk of injustice – the often the wealthy who are the better informed are able to exploit the ill-informed poor. By enabling the poor to coordinate, to voice their concerns and to lobby decision-

⁸ *E.g.* McKemey *et al.* (2003).

⁹ Souter (2004).

makers, ICTs can lead to reforms in the justice system. It has been shown that social justice leads to higher and longer sustained growth as well as more reduction of poverty.

Economies tend to grow when there are open markets for trade, technology and ideas. ICTs offer access to the global markets, better technologies for delivering products and services, and new opportunities for tapping global knowledge. Production amongst poor communities, by contrast, is mostly traded in local markets, so that the impact of these on pro-poor growth is limited; one exception is the development of niche markets in, for example, organic produce.

Box 5. The impact of phones on rural markets

Recent research in Mozambique shows that when farmers, traders and wholesalers have access to phones, markets becomes more dynamic. It is not clear that this results in lower prices, but it does mean that products can be moved more quickly, resulting in product diversification – as when farmers find new markets for fresh vegetables. A counter-intuitive finding is that farmers in rural areas have a culture of co-operating together, which extends to sharing market information, so that ownership of a phone does not necessarily give a farmer a competitive advantage. The whole community benefits from the presence of even a single phone.

Source: Scott *et al.*, 2005.¹⁰

ICTs support rural livelihoods for PPG

There are three factors which are crucial to **market access**: physical infrastructure (discussed above); relations between producers, traders and consumers; and information on how markets operate, including price fluctuations and consumer preferences. Access to ICTs by the poor through investment in infrastructure must, therefore, be accompanied by the development of content (or services) which facilitate relations and the exchange of market information. With regard to rural livelihoods, pro-poor growth will be enabled by the ICT sector not when the poor have access to technology, but **when the poor have access to useful content** – market data, agricultural options, educational opportunities (child and adult), health information, governance options, etc. Therefore, pro-poor policies in the ICT sector should include pro-poor content creation.

Remittances are becoming an increasingly important feature of rural economics, and their role as part of coping strategies of the rural poor are becoming recognised; the G8 estimate international remittances are now approaching USD 100 billion annually. Access to ICTs (phones) is an important factor in facilitating the flow of remittances, and it is clear this is true not only for “international” remittances, but also in the flow of cash (and goods) within nations.

Social capital is important to multi-spatial households. ICTs offer new opportunities for communication that can be central to alternative livelihood strategies. In addition the combination of traditional broadcast media with modern technologies offers new possibilities. For instance, it has been found that where radio has been used to broadcast (paid) short verbal messages from individuals to their family members in rural areas, it becomes very common and cost-effective.

Rural households can earn higher incomes from the production of agricultural goods for **non-local markets**, and ICTs can play a role, along with trade liberalisation and improved transport infrastructure, in opening up new markets. Higher incomes will in turn increase demand for consumer goods. This leads to the creation of non-farm jobs and employment diversification, especially in small

¹⁰ Scott *et al.* (2005).

towns close to agricultural production areas. Telecommunications in particular can enhance connections between rural and urban populations, although the main benefits are social, *i.e.* “keeping in touch”.

Box 6. The importance of keeping in touch

In Laos PDR, KfW provided funds for network extensions exclusively to rural areas. The mountainous geography and low population density made the project unattractive from a purely economic point of view. But as a pro-poor project it demonstrated strong demand from the poor. An impact study found that 80% of users earned less than 1 dollar a day. Their use focuses on contact with family members and information on government issues. By substituting one trip per month by a phone call, the study found that the poor were generating an average surplus of USD 77 per year. 75% of rural business users experienced an increase in profit and revenues.

Details at: www.lao.net/html/ICT/conf01soonsong.htm.

Spatial proximity to urban markets does not necessarily improve farmers’ access to the inputs and services required to increase agricultural **productivity**. Access to land, capital and labour are far more important in determining the extent to which farmers are able to benefit from markets. Similarly, access to global markets through ICTs can enhance agricultural production only in the context of the overall livelihood system. While some agencies are reporting examples of the poor making gains into new markets through application of ICTs, there are also other reports illustrating the barriers that the poor are experiencing and which ICTs cannot overcome.

Although investment in rural infrastructure (roads, electricity, and telecommunications) has an impact on reducing poverty (mainly due to improved opportunities for non-farm employment, and increased rural wages), it has been shown that investment in **education, agricultural research and rural livelihoods development** can achieve more impact.¹¹ The donor community is, therefore, being encouraged to make investments in livelihoods research and rural education, to give some of the best win-win investments. ICTs have a role to play in supporting the delivery of such services in rural communities. For example, radio has long been a tool for mass extension of research, and studies (in Vietnam among other places) show that improvements in the yields of crops from households with a radio are often equal to those of households who have regular visits from extension workers. ICTs offer opportunities for data analysis, enhancing planning, for training and dissemination of research, enhancing uptake of new methods and techniques, and for reducing vulnerabilities (through weather warnings and input mobilisation, for example).

ICTs increase voice and influence over key PPG policies

In order to identify pro-poor policies, the poor themselves must be involved in decision-making. The Poverty Reduction Strategy Papers (PRSPs) as a process are a key mechanism that can be used to ensure that pro-poor policies are appropriate and effective.

The relationship between ICTs and the PRSP process is important. ICTs have three key roles in PRSPs.

¹¹ Fan (2004).

1. **As a sector.** A number of PRSPs are mentioning the importance of strengthen the ICT sector (often referred to solely as telecommunication sector).
2. **As a mechanism or tool for enhancing other sectors.** ICTs can make a contribution towards pro-poor growth not simply by increasing access through a strengthened ICT sector but by strategic use of ICTs in other sectors, including content development. The PRSPs and associated processes are opportunities for the poor and their representatives to ensure that developments in these sectors are pro-poor.
3. **As a mechanism or tool to facilitate the PRSP process.** The PRSP is intended to be a driver of pro-poor growth, so it is essential that the poor are included in the policy-making process – ICTs offer opportunities to do this, in, for instance, talk-show radio, contacting their representatives, etc.

ICT as a sector can provide the new opportunities for pro-poor action as discussed above. The availability and accessibility of ICT services is itself dependent on the enabling and regulatory environment governing the ICT sector. That enabling environment should be pro-poor and will tend to be if it is part of the PRSP process.

Is this based on evidence, anecdote or assumption?

To summarise the key hypotheses:

- ICTs can support economic growth. They can support the processes of growth, and enhance key sectors of an economy, although the potential for developing countries remains unclear.
- The contribution of ICT can be through increased productivity, improved networking, and the growth of the ICT sector (production and service industries).
- There is debate among economists as to whether a focus on overall economic growth is enough to reduce poverty. We do know that economic growth is not a guarantee of poverty reduction, but it is absolutely essential for sustaining poverty reduction over the longer term.
- ICTs can be used to support pro-poor actions.
- ICTs are complementary to other forms of infrastructure – *e.g.* rural roads are still required.
- ICTs can help private sector development particularly through improved efficiencies (markets).
- ICTs can help improve access to markets for rural livelihoods.
- ICTs can give a voice to the poor in PRSP formulation processes.

But how much of this hypothesis is based on evidence and how much is assumption based on a few anecdotes?

Policy implications for donors – a few key recommendations

Until evidence to the contrary is found, the impact of investment in ICTs is likely to follow the normal pattern of essentially driving macro-economic (pro-rich) growth, the debate regarding the relative contributions to poverty reduction of overall, macro-economic growth and of specific pro-poor actions is likely to continue. There is a growing body of evidence linking investment in ICTs to economic growth, but little convincing evidence on the links to pro-poor growth. But to understand the

link between ICTs and pro-poor growth **more data are required**. A number of donors are beginning to address the requirement for further research in this area.

PRSP processes should be encouraged to include an analysis and comment on the role of ICTs, not only as a sector within the economy, but on their uptake as complementary factors in pro-poor infrastructure, private-sector development, and in rural livelihoods. Donors should pay more attention to an enabling pro-poor environment in ICT-related regulations and policies.

Where it has been highlighted in the PRSP, donors should seek to support some **linked infrastructure programmes for rural areas** (*e.g.* extending the mobile phone network into areas where new rural roads are built). There is a positive role for donors and governments to play in this area, alongside the private sector, if the impact of increasing access to ICTs is going to be genuinely pro-poor.

When considering the potential benefits of investment in ICTs, policy-makers should be aware of the available “lessons learned” from activities in other sectors. Since rural livelihoods and education are said to be win-win investments, resources intended to be stimulation of pro-poor growth, and which are ICT orientated, should be **concentrated on rural livelihoods and education**.

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Chapter 3

The Contribution of ICTs to Achieving the Millennium Development Goals (MDGs)

Introduction

The Millennium Development Goals (MDGs) are an outcome expression of the global fight against poverty. The outcomes are based on a pro-poor enabling environment, which includes pro-poor economic growth, the delivery of services to the poor, and the responses of the poor in terms of livelihoods. The analysis of the latter can be expressed in terms of market based pro-poor growth, sustainable livelihoods, resource distribution including social assets or a rights-based analysis. The fight to fulfil the MDGs is neither an MDG-by-MDG fight nor even a sector-by-sector fight. Poverty is multidimensional, and our solutions also have to be multidimensional.

Information and Communication Technologies (ICTs) are such a case in point. For example, the advent of a telecommunication system which reaches to poor rural regions is: i) a mechanism by which the market may change potentially in favour of the rural poor (MDG1); ii) a mechanism for supporting teachers in isolated schools (MDG2); iii) an opportunity for women to start businesses they may not otherwise have been able to (MDG3); and, iv) for supporting health workers in isolated clinics (MDGs 4, 5 and 6).

The link between ICTs and MDGs is currently a key subject for debate. This chapter has drawn on a number of recent works including OECD (2004a), World Bank (2003b), the plan of action of UNICT Task Force,¹² among others. Many agencies are now focusing attention on the linkages between investment in ICTs and fulfilling the MDGs, and after many years of pilot projects the focus of ICT interventions seems to be in mainstreaming strategies. Given the number of recent papers, what is distinctive about this paper? This paper seeks to draw out the key messages from recent work, with due regard to the degree of confidence we have in those messages, and provide a challenging basis for discussion among donors on how best to take this work forward in an effective and co-ordinated way.

Box 7. The Millennium Development Goals

1. Eradicate extreme poverty and hunger.
2. Achieve universal primary education.
3. Promote gender equality and empowerment of women.
4. Reduce child mortality.
5. Improve maternal health.
6. Combat HIV/AIDS, malaria and other diseases.
7. Ensure environmental sustainability.
8. Develop a global partnership for development.

Details about the DAC and MDGs at: www.oecd.org/dac/mdg

¹²

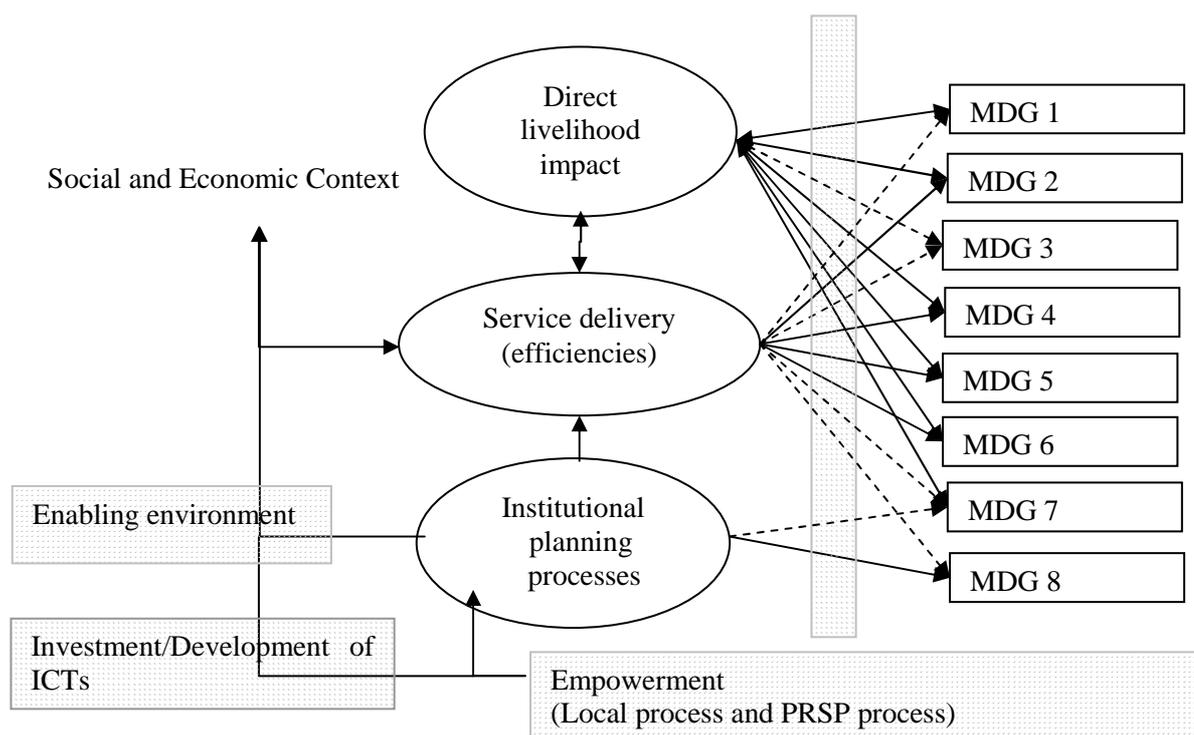
Details at: www.unicttaskforce.org/about/planofaction.html.

How do ICTs contribute to achieving MDGs?

The MDGs have helped the development community to focus. There has been a significant shift from presenting achievement as the outcomes of projects and programmes to discussing the movement of whole nations and groups of people to the MDG targets. This has to be reflected in the discussion of ICTs. Many of the newer ICTs have had five years of pilots and “experimentation”. If ICTs are to contribute to the 2015 goals, they now have to be mainstreamed – to be replicated and scaled where they are appropriate and relevant. This paper aims to help prioritise responses to these changes.

Experience has shown that ICT/technology-push projects are not the best contributions to fulfilling the MDGs. MDG-led development co-operation, pulling in ICTs where appropriate and efficient, will have more of an impact on poverty. Part of this shift from push to pull will depend on **mainstreaming**, which will depend to a large extent on articulating ICTs potential to different audiences. A few development agencies, such as USAID (2004), have seen ICTs being embedded into mainstream programmes, but most other agencies are finding the process more difficult. One of the difficulties is the barrier of insufficient information – questions over the actual impact of an ICT intervention, and of its potential to scale, replicate and to be sustainable.

Figure 2. Concept – Three Key Processes that Form the MDG Outcomes, and the Key Empowerment "Filter"



To discuss the pull of the MDGs for the “services” of ICTs, Figure 2 proposes the basic concept that the outcomes of the MDGs will be reached through three basic processes – livelihood enhancement, efficiency in delivering services, and efficiencies and voice in the planning processes. The economic and social context will be important to the relative contributions, and where pro-poor

growth has been prioritised, that should enhance the economic contribution.¹³ Similarly the social context becomes important in that it can often determine the opportunities for voice and empowerment. Empowerment, particularly in the form of the PRSPs, can be thought of as a filter that determines the flow and ultimately the impact of the processes. A few examples of the linkages between each process and outcome are given below.

“ICT sector” projects, especially policy and infrastructure/pipe-focused interventions, are only one step in a theory of change – a potential contribution to the other processes. The combination of the economy and the enabling and regulatory environment will affect the pool of ICT choices available from which the three basic processes can pull. The targets and goals of the MDGs are expected to be seen after such pro-poor processes have been implemented, and the ICT community should now describe how ICTs will affect this part of the development story. The information and knowledge of poor people come from not one ICT but from a mixture of many of them, and from the information that the ICT allows access to. It is the use of the information at this level among the poor and the application of knowledge that affects their lives, that gives progress towards achieving the MDG targets.

How can ICTs contribute to the planning processes – national and international

We take for granted the efficiency gains made by the recent advances in electronic communication. The OECD regularly publishes reports that are accessible to any government, any department in any country, and are open to public scrutiny. The media can report internationally disasters that provoke immediate humanitarian aid – although as recently as 1984 the drought in Ethiopia was initially “hidden”; its revelation was itself a world event. It would be hard to envisage some of the most effective global partnerships and networks (MDG 8) operating without the use of e-mail and international communications. “In an example of Global Partnership that works towards MDG 8 Target 2 (address the special needs of small island developing states), Japan, Australia and New Zealand co-operated to build an internal network for the University of the South Pacific (created by 12 Pacific island-countries) to send and receive training material and be able to communicate via satellite.” (JICA, 2003)

In terms of national planning in Africa, urban telephony, especially when linked to radio, has enabled consultation to occur where it would otherwise have been passed over. And within governments there is a much wider availability of documents even to junior officials. Specifically in regard to environment planning (MDG 7) we note that ICTs, especially media, can be used very effectively by a range of stakeholders to raise the degree of **awareness and accountability** of decision- and policy-makers, to ensure that the principles of sustainable development are integrated into country policies and programmes. Environmental monitoring, modelling, forecasting environmental threats – as well as planning how best to manage these risks – all depend heavily on ICT tools.

The Afghanistan Codan Radio Program has linked communications among the Kabul-based Afghan Government and its 32 provincial governments through an electronic network. (USAID, 2004)

In this way ICTs have become an integral part of the move towards fulfilling the MDGs. Papers are shared, thoughts and concepts developed, and lessons learned from one location can be transferred at least cost.

¹³ See Chapter 2.

How can ICTs contribute to empowerment and the PRSP process?

Empowerment is integral to effective planning. The planning process should include the empowerment of women if it is to fulfil MDG 3, and empowerment of the marginalised is captured within MDG 8. Within the development community, in addition to the relatively recent shift to results-based monitoring (that is, targeting the MDGs), there has also been the significant shift to PRSPs. The potential of an open, transparent consultative process encompassed in the PRSP has yet to be fully realised, but it is here that ICTs have an important role to play. They can contribute to an inclusive, informed priority-setting, increasing accountability and eventually good governance.

The role ICTs may play in the development and monitoring of PRSPs is very much determined by the current understanding and context of the PRSP process. Civil society is increasingly looking to umbrella organisations to represent the views of the poor, and contact with such organisations is enhanced by ICTs. This has strengthened information-sharing and debate among civil-society organisations, and has enhanced their advocacy capacity. ICTs have enhanced the new openness by government, making circulation of key documents and budgets possible (e-government).

Connexiones, an Internet/telecentre based project that prioritises discussion by young people of democracy and their roles as citizens. (Batchelor *et al.*, 2003)

Although genuine debate on the media is often lacking, the World Bank has begun to recognise that so far too little attention has been paid to the importance of information – through the media and other channels – in creating a sense of national ownership and readiness to participate in PRSPs. The coming years will see an increasing emphasis and dialogue on the role of development communication in both fulfilling development targets, but also in consultation and planning for reaching those targets.

Finally on empowerment, in addition to improving day-to-day abilities for communication, and associated awareness-raising, lobbying and access to governance, ICTs are beginning to affect the basic structure of democracy. Experiments in offering access to land titles in India seem to have had a significant impact on the marginalised, and lowered corruption and opportunity costs for the user.

“Gyandoot” (offering land title deeds through the Internet) is said to dramatically reduce the time required for the consumer to access the deed, and lower corruption opportunities. (Batchelor *et al.*, 2003)

The three challenges in the above seem to be:

- **Inclusion of the public** – The PRSP process in each country is intended to be a key instrument for tackling the MDGs. A key tool within the PRSP process is participation, which should include both consultation and debate. ICTs offer opportunities for the poor to contribute to the formation of the PRSP – through talk-show radio, contacting their representatives, etc. Where access to ICTs is weak, then inclusion of the public in the formation of the PRSP may be hindered by lack of suitable mechanisms for consultation and debate.
- **Information overload** – officials are beginning not to read their emails, and websites which draw attention to vital lessons learned are buried. How will the planning processes include the right stakeholders, and ensure they have real access to the key information?
- **Technical illiteracy** (even at the highest levels). The pace of change with ICTs is so fast that everyone involved with ICTs has to constantly update their skills and learn new approaches.

Senior statesmen sometimes find it difficult to make use of, and to see the application of, the new opportunities for ICTs – the cliché that the first PC in an organisation often sits unused in the director’s office is often true.

How can ICTs contribute to efficiencies in service delivery?

Being results-orientated shifts our emphasis, and makes the question of efficiency more important than before. The impact on the MDGs is defined by the context and the efficiencies gained. Whereas judgement of progress has in the past been made on the amounts of inputs to a delivery sector, the analysis required now must go beyond the inputs, even beyond apparent “project” efficiencies, to the efficiencies of delivery service (results-orientated performance).

With regard to MDG 2, for instance, a series of surveys on children’s educational attainment at the end of their primary education bore no relation to the amount spent per pupil. It was teacher training, teacher experience, teacher evaluations, textbooks and the timing of the day that determined pupils’ performance. These results thus call into question the accepted relationship between education spending and earning potential, and hence that between education spending and poverty reduction.

Three years after traditional birth assistants in Iganga district in Uganda started using walkie-talkies as an integral part of their work the maternal mortality dropped by 50%. (Skuse, 2004)

Thus when we discuss the role of ICTs in the efficiencies of service delivery, it poses a complex question which cannot be answered with the results of a single pilot project. Lanvin and Qiang (2003) discuss the role of ICTs in service delivery as a question of resource-allocation. They note that the overall efficiencies are dependent on both ICT-related and non-ICT-related efficiencies, and that the analysis should include the opportunity costs of a particular strategy. At national and local tiers of government, ICTs can bring about the more efficient use, planning and targeting of the limited resources for primary education. They can also improve the efficiency and effectiveness of education ministries and related bodies, but this has to be proven in the context of the overall service delivery.

As above in MDG2 and the educational sector, ICTs have begun to play a role in co-ordination of resources within the health sector (MDGs 4, 5 and 6), in the ongoing training of health workers, and in the monitoring of progress towards poverty reduction. Decentralisation in such countries as Uganda has led to a more focussed and efficient use of resources, which has been communicated upstream by use of the new technologies. There are clear case-study examples of data being gathered at district level that have to be used in national planning, and the potential for ICTs to contribute to this flow of data from district to national is substantial.

ICTs are already making a sizable contribution to MDG 4. Many childhood diseases are preventable through vaccines or simply by better understanding of the causes. And ICTs often play a key role in both. Radio-based awareness-raising is playing a crucial role in the fight against HIV/AIDS, tuberculosis and other diseases. Tracking communicable diseases is becoming affordable through the use of ICTs. ICTs, especially radio and TV, also make a major impact on the processes of social change around HIV/AIDS, facilitating open communication, dialogue and debate. ICTs also help reduce stigma around HIV/AIDS that leads to an uptake of voluntary counselling and testing.¹⁴

Yet the progress towards the MDGs that rely on service delivery (that is, MDGs 2, 4, 5 and 6) is not based solely on delivery itself. It is related directly (beneficially or adversely) to livelihood

¹⁴ Skuse (2004).

outcomes. For instance, a key challenge of education (MDG 2) is not only the effectiveness of educational delivery when at school but actually in getting the child to school.

Voxiva is a telephone and computer database for health work in Peru. Health workers phone to register communicable cases allowing planning and response, and workers gain advice supporting their day to day work. (Batchelor *et al.*, 2003)

The three key challenges regarding the above service delivery are:

- **Distribution of resources** – there is generally not enough evidence to convince all stakeholders that ICT-related efficiencies were/are more effective than those derived elsewhere. Without such evidence decision-makers cannot make informed decisions.
- **Rapid changes in ICTs** – the North is finding it has constantly to change and upgrade ICT systems in order to maintain the efficiencies of service. For developing countries, what may seem a state-of-the-art system this year may be out of date before everyone has been trained in its use. The constant expense of upgrades should be factored into the initial cost-benefit analysis. Further reflection on the trade-off with cost-drops and higher level of service would bring practical benefits.
- **Capacity in effectively using ICT for development, not equipment, is often the main constraint.** Training programmes need to be in place for the effective use of ICTs. Having said that, simple-to-use technology such as the phone has shown to be intuitive and human capacity to be developed by “viral training”.¹⁵

How can ICTs contribute to the MDGS through livelihood enhancement?

MDGs 4, 5 and 6 will not be fulfilled uniquely through the delivery of better health care.

Health services play an important role in promoting and protecting health. But, in the long term, economic security, education, nutrition, water, sanitation and the broader physical and social environment are the arbiters of population health prospects. These factors tend to move together. Their combined impact is illustrated by the well-known relationship between income and infant mortality. (DFID, 2001)

Since the opportunities for ICTs are moved forward by the private sector (where and when there is an enabling policy and regulatory environment), opportunities for “unplanned” efficiencies in service delivery are often available for the public. For instance, rural health staff in Uganda have found the phone allows them to request support, with a subsequent improvement in their activities. Similarly, the availability of phones in rural Uganda also presents an opportunity for the rural poor. These opportunities can benefit rural livelihoods or not as the case may be – they are opportunities and as such they most likely will have a combination of beneficial and harmful effects. Pro-poor policies should seek to ensure that the marginalised can take up the opportunities where they are beneficial to them, and reduce the harmful affects where possible.

¹⁵ Digital convergence means that “telephones” are rapidly becoming gateways to various forms of communication – they have synchronous and asynchronous voice transactions, text, images, video and radio reception. And they are increasingly being used for financial transactions. Where the technology is simple enough for “viral training” (that is, with neighbour teaching neighbour how to use), then uptake by the poor seems to occur.

With regard to MDG 1, for instance, Chapter 2 shows how infrastructure, agriculture and private-sector development can work together with ICTs to bring about pro-poor growth in rural areas. Telecommunications alone can change some aspects of the market, but it is the combination of the developmental changes that lead to lasting effects.

The Southern Africa Sustainable Tree Crops Program (STCP) uses a portal, consisting of a website and Intranet, for coordination of field activities among partners in coffee, cocoa and other tree crops. (USAID, 2004)

Similarly, with MDG 3, women, particularly those in developing countries, often do not benefit from new technologies – a position which reflects the unequal power-relations in societies as a whole. ICTs can be used to either exacerbate or transform unequal power-relations; they cannot create gender equality, nor end poverty, but they can be powerful tools for social action and social change in the right direction.

Box 8. Gender and ICTs

Recent studies in Africa show that there is near-equal use of the telephone by women as by men. Given women's unequal status, this effectively means that the telephone has opened new opportunities and is redressing some imbalances (McKemey *et al.*, 2004). Telephones have been very effectively used by Grameen to empower women in small businesses that serve their community (DAC POVNET 2004). There are some case studies that suggest that ICTs open new economic opportunities for women by lowering the necessity of travelling (Batchelor *et al.*, 2003), although more research is required before this can be positively asserted.

It is possible that phones (and other simple to use ICT devices) may be used to open new opportunities for women to communicate, learn and undertake economic activities.

With regard to MDG 7, and urban slum development in particular, recent studies show that slum dwellers spend almost as much on communication as they do on energy – an indication that ICTs are a high priority for the poor and are an essential tool for managing livelihood assets. Similarly, a number of studies show that young people can develop productive work skills through use of ICTs.

Information and communication exchanges among the poor will be based on a mix of technologies. It is the information and communication that is important for the MDGs and no one technology should overshadow the use of other contextually appropriate ones.

The three key challenges for the above are:

- **Equal access therefore means equality of access – no penalty price for the poor.** “For ICT to have a positive development impact, the various social groups must have equal access to them, particularly disadvantaged groups such as the poor, children and indigenous people.”¹⁶ Recent studies on phone and radio use suggest that the marginalised can have access to the technology but they may pay a higher price per unit of use.
- **Useful relevant content is a key requirement.** Access to ICTs alone is not enough to fulfil the MDGs. It is access to useful content that will contribute to MDG 1 (market prices, for example), MDG 4 (mother-child health messages), MDG 7 (government policies on slum

¹⁶ CIDA in OECD (2003).

development), MDG 8 (local job-opportunities for youth), anti-corruption (land-titles availability), and empowerment (contribution to debates on media about the PRSP).

- **Creating an enabling environment that allows the poor to be creative** – in Uganda, for example, trading of airtime has already been developed by the public. This virtual currency reduces transactions costs and risks within the country. It is relatively easy to say what technologies will be available in five to ten years, but it is impossible to say how people will use them. Spontaneous actions, such as the virtual trading in Uganda, require policy environments that are flexible enough to support pro-poor response to ICT innovations.

Recommendations

This chapter has focused on the three key processes that lead to the MDGs. ICTs can enhance these processes and experience has clearly shown some potential uses. The question for policy makers is no longer whether ICT can be used or not – it can. The question is now: “Should it be used?”

We have to ask: “Which is the best strategy for enhancing livelihoods, for increasing delivery efficiencies and for improving planning processes?” The question which follows closely is: “Is the most effective strategy one that includes ICTs?” ICTs do not have to be treated as a separate path to the MDGs but as a tool to enhance the key processes.

Having taken this approach, there remain some realities donors have to face:

- **Capacity** in effectively using ICT for development and useful content are often the main constraints, not equipment.
- Therefore within the time frame of the MDGs (2015), digital devices with **simple interfaces** will be the main tool in the field.
- The **private sector** is instrumental in expanding ICT for development access, but other players (governments, civil society, etc.) should lead on applications.
- **Development of “developmental” content** on and through such devices should be a priority for donors. This development should not occur in the “ICT sector”, but within the sector responding – education, health, governance.
- Incorporating ICTs into the planning of development interventions requires an **analysis of “with” and “without” scenarios**, which in turn requires more rigorous analysis of the possibilities of replicating and scaling current pilots.
- In order to do a more rigorous analysis, **more data** are required on the linkages between the use of ICT and their impact on the MDGs.

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Chapter 4

Integrating ICTs into Development Co-operation

Introduction

The roles of ICTs in the economy, in the delivery sector and in development processes have been discussed in previous Chapters, which showed that, just as poverty is multidimensional, so, too, the role of ICTs is multidimensional. They emphasised that ICTs are a tool in the fight against poverty but are not an end in themselves.

The papers drew attention to two key challenges:

- **ICTs are subject to a very rapid pace of change**, which means that new opportunities regarding ways of working, market development and livelihood practice have arisen in the last few years; these may or may not lead to economic growth, and in particular poverty reduction. New ways of working may contribute to achieving the MDGs but may also distract valuable resources.
- Because of that pace of change **the effect of ICTs is (and has to be) constantly under review**, and there is a clear call for more data and analysis to try to understand the impact of ICTs on the social and economic context.

Given the shortage of data on the impact of ICTs and the constantly changing scene, how can one best discuss the integration of ICTs in development co-operation?

Are there ICT “lessons learned” or “good practice”?

Chapter 2 concluded that “one of the most appropriate ways to generate that data, and to act in the interim, is to adhere to good practice in development co-operation by using the PRSP processes to include an analysis and comment on the role of ICTs”. To achieve poverty reduction through the use of ICTs, and a pro-poor growth of the economy, emphasis has to be placed on development co-operation processes.

This paper draws on the responses of DAC members to requests for ICT “lessons learned” and “good practice”, which can be found in the OECD document “ICTs for Development: Lessons Learned and Good Practices”.¹⁷ Members agreed that in ICT, as with all development co-operation,

¹⁷ For ease of reading, information sources in the text are simplified to the names of DAC members and/or development agencies. A full list of sources of information can be found in the OECD document “ICTs for Development: Lessons Learned and Good Practices”. (OECD 2004a).

“OECD-DAC/SDC Meeting, Geneva, 2004” refers to “OECD-DAC/SDC Bilateral Donor Agencies Meeting: Knowledge and People-centred Communication – Potentials and Pitfalls for Poverty Reduction and Advancements of Millennium Development Goals (MDGs)”, 1 September 2004, Geneva, Switzerland. (OECD 2004g).

success or failure depends more on developmental processes rather than the specifics of the co-operation. Integrating ICTs into development co-operation is not, therefore, a special case, different from all other development interventions. It must follow basic principles of development co-operation good practice. These processes are summarised in The DAC Guidelines *Poverty Reduction*.¹⁸

Box 9. The DAC Guidelines *Poverty Reduction*

“Developing countries, with the support of multilateral institutions, the bilateral development assistance community and civil society organisations, are focusing as never before on the development priority of reducing poverty by half by 2015. Country-led and country-owned poverty reduction strategies focusing on local needs and priorities as determined by stakeholders are now the focus of all development assistance efforts. The DAC Guidelines *Poverty Reduction* provide practical information about the nature of poverty and best practice approaches, policies, instruments and channels for tackling it. They also break new ground in setting out the parameters for building effective partnerships with governments, civil society, and other development actors, and in describing how institutional change and development within bilateral agencies themselves could be undertaken for mainstreaming poverty reduction, partnership and policy coherence.”

Source: OECD (2001).

In the *OECD-DAC Donor ICT Strategies Matrix*,¹⁹ DAC members presented the following principles:

- Sustainable ICT projects should be **locally owned** and accompanied by human **capacity** development (CIDA, Japan, Netherlands).
- **Capacity** in effectively using ICTs for development is often the main constraint, not equipment (majority of donors).
- The **private sector** is instrumental in expanding ICTs for development access and applications (USAID).
- Governments play a key role in establishing a well-regulated, competitive **enabling environment** for ICTs to flourish (CIDA, EC and majority of donors).
- For ICTs to have a positive development impact, the various social groups must have **equal access** to them, particularly disadvantaged groups such as the poor, children and indigenous people (CIDA).
- Many important aspects of information and communication infrastructure are cross-border in nature, and therefore require **international/regional co-operation** (World Bank).

While these points (the emphasis is ours) are presented in the context of ICTs, the principles tend to be what might be called “standard” principles of good practice in development co-operation – ownership, capacity building, enabling environment, a focus on social equality, and multi stakeholder co-operation. Perhaps the one exception to a commonly held development principle is the role of the private sector – an issue which is still under much discussion in the development community.

¹⁸ OECD (2001), The DAC Guidelines *Poverty Reduction*, OECD. Paris (ISBN 92-64-19506-8).

¹⁹ OECD (2003b).

Integrating the principles of development co-operation with ICTs

Bringing together the conclusions of previous chapters, the experience of DAC members involved in ICTs, and the key principles captured in The DAC Guidelines *Poverty Reduction* (representing lessons learned from the wider development community), we can identify six principles of good practice to be discussed:

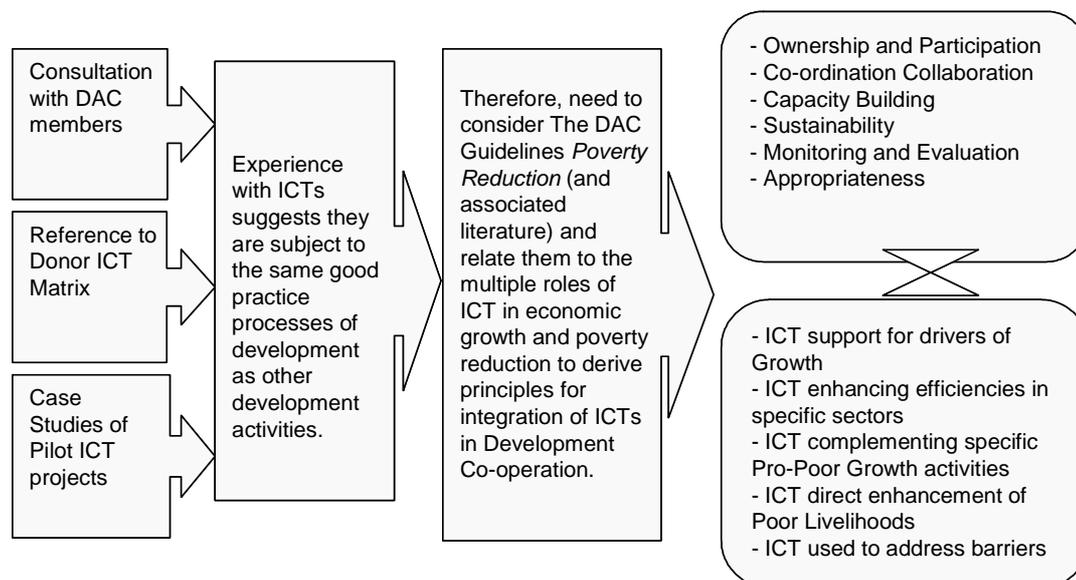
Principles	The DAC Guidelines <i>Poverty Reduction</i>
Ownership and Participation	“Empowering the poor” “The principles underpinning this vision are – partnership, ownership, country leadership, broad-based participation, development effectiveness and accountability”
Co-ordination and Collaboration	“Forging effective poverty reduction partnerships”
Capacity Building	“Strengthening partners’ own capacities to reduce poverty should be an overriding objective for technical co-operation.”
Sustainability	“Support partner efforts to promote sustainable pro-poor growth, reduce inequality and increase their shares of global trade and investment flows.”
Monitoring and Evaluation	“Assess development co-operation for its impact on poverty and develop the requisite monitoring and evaluation systems and methodologies.”
Appropriateness	Ensuring that the partner country’s poverty reduction strategy is legitimate, adequate and appropriate.

In order to structure this chapter on integrating ICTs in development co-operation, we will consider how each of these six key principles can be applied to the five points of ICT engagement in the framework for economic growth identified in Chapter 2.

- ICT support for drivers of growth.
- ICT enhancing efficiencies in specific sectors.
- ICT complementing specific pro-poor growth activities.
- ICT direct enhancement of poor livelihoods.
- ICT used to address barriers to growth.

The logic used in drawing up this framework for discussion is represented in Figure 3.

Figure 3. Framework for discussing principles of development co-operation



The matrix in Figure 4 summarises some of the projects undertaken by DAC members that relate specifically to the key working principles and the ICT points of engagement. Where examples of projects are given, they are intended only to be indicative of the type of intervention that may result of the integrated use of ICTs and do not necessarily suggest that the quoted project is recognised by all DAC members as good practice.

The discussion is presented as the current state of DAC members' knowledge – to be refined and evolved as new information and experience is encountered. Not all DAC members have reached the same stage in using ICTs for development. The process of identifying the key principles is important for all DAC members, both pioneers and newcomers. It helps pioneers focus on what works while allowing less-experienced donors to benefit from past experience instead of having to reinvent the wheel.

Who decides? (ownership and participation)

Planning for economic growth

The planned development of ICT for economic growth will depend not so much on knowing the exact economic equation but on the processes of ownership and participation surrounding policy development.

Economic growth depends on many variables, of course, and it is the enabling environment that will determine how the control of these variables is divided between the public and private sectors. The OECD-DAC Donor ICT Strategies Matrix suggests that the private sector should be given the larger role in ICT infrastructure development – although this conclusion is based on the premise that there are enough data to identify the linkages between ICTs and the factors of economic growth, and the direction of the cause and effect. For a number of reasons, this linkage is not yet clear.

Figure 4. Framework matrix and example projects

	ICT support for Growth Processes	ICT enhancing efficiencies in specific sectors	ICT complementing specific Pro-Poor Growth activities	ICT enhancement of Poor Livelihoods	ICT used to address barriers
Ownership (Participation)	Local owned supportive research for the enabling environment. www.elds.org/static/DOC15227.htm	Reduction of vulnerabilities by increased good governance http://www.comnet-it.org/news/stlucia/Thu-12th-CarlosBatista-santalucia-unesco-cmb.ppt	Reduction of vulnerabilities by increased good governance http://www.oecd.org/dataoecd/4/31/15987985.pdf	Improved planning for natural resources www.usaid.gov/qn/infotechnology	Reduction of vulnerabilities by increased good governance http://www.lawlibrary.co.za/notice/updates/2004/issue26.htm
Co-ordination Collaboration	Integrating ICT with other sectors http://www.usaid.gov/tz/ppg7.html	PRSPs that include ICTs http://www.oecd.org/dataoecd/4/31/15987985.pdf	Pro-Poor collaboration on ICTs and other sectors www.iicd.org	Private sector support for rural livelihoods http://www.niaa.org/index.php?id=324	
Capacity Building	Strengthening policy makers www.nettelafira.org	Improved health information for planning www.phrplus.org/countries_alb.html			
Sustainability	Private sector support for urban livelihoods (and gender equality) http://www.iie.org/wcoast/wit.html			Using ICTs to reach marginalised areas www.usp.ac.fj/df/	Private sector support for rural livelihoods http://www.echoupal.com/
Monitoring and Evaluation	The rapid growth of Mobile phones www.telafrica.org	M&E of ICTs to offer mainstream insights www.infodev.org			
Appropriateness	M&E of Service delivery efficiencies unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN015131.pdf	Village Payphones as a support for rural livelihoods http://tech.gfusa.org/villagepayphone.shtml	Distance education by radio www.dot-com-alliance.org/newsletter/article.php?article_id=90		Communication for Development HIV/AIDS http://mail.viky.net/usaidd/cgi-bin/index.pl
		The importance of local content www.jpiego.jhu.edu/global/talc.htm			

The causal relationship between productivity and ICTs is still under debate. *ICTs and Economic Growth in Developing Countries*²⁰ reviewed the evidence for links between ICTs, productivity and economic growth in OECD countries set out in *ICT and Economic Growth: Evidence from OECD Countries, Industries and Firms*,²¹ concluding with recommendations for action by the governments of developing countries that will facilitate ICT investment and positive returns, focused on policy development processes, infrastructure and access, liberalisation and deregulation, and human capital.

Among other conclusions, *ICTs and Economic Growth in Developing Countries* stated that “Government policy priorities should be to reduce the factors that inhibit the effective use of ICTs and take positive steps that will enable maximisation of the benefits that can be derived from ICTs, integrating ICT policy more effectively into overall national socio-economic development strategies”.

Other conclusions in that paper point to the lack of data or evidence on the links between ICTs and productivity, and the importance of analysing such data in the economic context, which is very different for LLDCs and G8 countries. It is likely that the coming few years will see some clarification of the interface between the enabling environment (and the role of the government in it), and the development of ICT infrastructure that supports economic growth processes. **Good practice in development co-operation will be to create a culture of learning among government and private sector bodies, in order to feed data into what is currently an unmapped environment.**

For instance, the *Fair Access to Internet Report*²² has tentatively revealed two aspects of policy environment that seem to be very important lessons for decision-makers. In a comparison of policy environment and access to ICTs, it noted that the lack of a policy environment in Algeria led to the development of relatively small-scale private-sector initiatives that have lowered the cost of access to ICTs – and that the forthcoming tightening of the policy environment may well reduce access. It also identified that Uganda, which has had a seemingly positive enabling environment for ICTs (in comparison with many of its neighbours) had not resulted in significantly better access and lower costs. The lesson here is not that the policy environment has not had its intended impact, since the research is only tentative and requires confirmation. Rather, the lesson to be learned is from the response of the government – when the results of the paper were seen, the regulator immediately asked the experts what more could be done to improve the enabling environment, heard their answers and took action within months of the study being published.

This is an illustration of good practice in development co-operation: donor-funded research was owned by local researchers who were able to present results to national decision-makers. They then entered into dialogue that resulted in positive changes in the enabling environment.

Who should mention ICTs in national planning processes?

Development good practice states that the planning process should be owned by the national government.²³

²⁰ OECD (2004h).

²¹ OECD (2003a).

²² Gillwald *et al.* (2004).

²³ The DAC Guidelines *Poverty Reduction*.

ICT can and has both a **positive and negative** role in a developing economy. The last ten years have been dominated by an international discussion of whether the rapid changes in ICTs will exacerbate the North-South divide or be a powerful tool to combat poverty. Much will depend on how the development community exploits its potentialities. (Austria)

An important element in maximising the efficiencies for economic growth is the role of planning frameworks for economic strategies. These form the enabling environment for not only the development of the ICT infrastructure but also the development of applications and services.

Interventions that seek to create enabling environments so that ICTs can have an influence on the economic processes of growth should be **demand-driven**. Developing/transition countries should be enabled to determine if and how ICTs are a priority for their social and economic development.

The key instruments would seem to be the Country Development Programming Frameworks (CDPF) process, as well as Poverty Reduction Strategy Papers. Some DAC members say it is essential for developing countries to have clear strategies to promote ICTs on a national scale and to coordinate with other countries on a regional basis (Japan/JICA). But a recent review of 33 first-generation PRSPs as of January 2004 stated that ICTs were explicitly mentioned in only a few cases.²⁴ Other countries did not include ICTs as an independent strategic component although they mention telecommunications-sector development as an “important factor for rural/agricultural development” or as “one of the components of the infrastructure for economic growth”.

Incorporating ICTs into the planning frameworks is not an easy or obvious process. Their presence in the PRSP depends on the awareness of the decision-makers to the potential offered by ICTs. It should also depend on a rigorous analysis of the relative costs of different approaches – and that is hampered by the lack of data already mentioned and the rapidly changing landscape of ICT applications. Telecommunications can have an impact on rural livelihoods – but their role may not always be recognised as important enough to be mentioned in a crowded PRSP or CDPF.

This distinction between ICTs as an infrastructure and as a tool to achieve efficiency gains in other sectors is important to understanding their role in the development picture. *Financing ICTs for Development: Efforts of DAC Members*²⁵ clearly shows that ODA commitments to ICT infrastructure have declined from USD1.2 billion in 1990 to USD194 million in 2002. Yet many donors have simultaneously integrated ICT components into their development programmes. For example, the health and family-planning sector programme in Vietnam (supported by German financial co-operation) comprises, among other things, the establishment of a computer-based logistical management system to improve stock-keeping, order-processing and the distribution and monitoring of drug flows. Such a programme would not stand out on either official ODA statistics nor on national plans (PRSP) as an “ICT programme” and yet ICTs have been one of the keys for improving efficiency.

In many cases there is an increasing call for specific ICT planning documents with national coverage, such as e-strategy or ICT analysis documents. For instance, UNECA has proposed that the National Information and Communication Infrastructure Policies and Plans (e-strategies) (the NICI)

²⁴ Room Document, “Information and Communication Technology (ICT) in Poverty Reduction Strategy Papers (PRSPs) as of January 2004”, at the DCD Seminar “A Dialogue on ICTs and Poverty Reduction: The Harvard Forum”, held on 7 July 2004, OECD Paris. It was prepared by Mr. Naomichi Murooka, currently infrastructure specialist at the Japan International Cooperation Agency (JICA).

²⁵ OECD (2005).

can be undertaken as a national response to facilitate the digital inclusion of Africa and its integration into the globalisation process. This will also provide countries with an exercise for developing national ICT policies and strategies and implementable programmes, provide a guiding framework for integrating ICTs into national development programmes, and be a monitoring and evaluation tool of the role of ICTs in national development.²⁶ The emphasis here, though, is that the NICI can follow only after the national priorities have been established, and the NICI must be within the context of the development policy framework.

What, in these circumstances, is good practice in development co-operation? We know that it is important to some DAC members that the development community encourage partners in developing/transition countries to take the lead to reflect their own priorities, rather than the priorities of donors (CIDA). On the other hand some donors suggest “incorporating ICT in Country and Regional Strategy Papers will ensure ownership by the country or the region concerned as well as differentiation and prioritisation according to the needs and policy situation” (EC).

Using ICTs to give a voice in national planning processes

The intersection of good practice development co-operation (ownership and participation) and ICTs suggests what ought to be done. The DAC Guidelines *Poverty Reduction* suggest that the key elements for empowering the poor include:

ICTs and key elements of empowering the poor	
Strengthening popular participation in formulating and implementing policy and in assessing impact	Here ICT has a role in the very process of formulating the policies that strengthen its development. In a suitable socio-political environment, radio is a proven mechanism for generating discussion of policies. The increasing use of the telephone combines with community radios to offer a forum for public discussion and opinion. “Such changes will not occur purely as a result of discussions and decisions within the offices of governmental, multilateral or private funders. The media and civil society also play an important role” (Panos, 2004).
Promoting democratic and accountable governance and transparency	Even the humble photocopier has had an impact on government transparency all over the world. Documents have been made available where otherwise they would have been too expensive to distribute (Riley, 2001).
Promoting human rights and the rights of marginalised groups	The voice of groups based in outlying regions away from the seat of government can be much enhanced by ICTs.
Increasing the scope for civil society interaction and freedom of association	MDG 8 notes the role of partnerships, and ICTs have taken a role in the formation of national and international partnerships that have increased the scope of civil society interaction.
Supporting a free press	The freedom of the press is a socio-political outcome, but the role of ICT in making that voice widely known is well known.
Reinforcing the rule of law and the impartial administration of justice	ICTs have been used to create efficiencies within the judicial system, and to develop human capacity among the legal system.
	../.

²⁶ SCAN-ICT, UNECA (2004).

Promoting decent work conditions	Advocacy and lobbying through ICTs, particularly the visual broadcasting of working conditions internationally, has certainly influenced a number of economies.
Giving the poor more voice and control over the type, quality and delivery of services they receive	The role of the telephone to increase delivery of services to remote areas, the role of the radio in health education and agricultural extension, and the role of the press in highlighting failing services are all well known. The rapid change of ICTs can offer new opportunities for the poor to have a lobbying voice – although the outcome of the lobbying will be determined by a much bigger number of variables.

Box 10. e-Justice

The e-Justice programme in South-Africa is a multi-year programme designed to support fundamental reforms necessary to establish a more fair, accessible and efficient system of justice there. The pilot e-Justice programme was introduced to particularly deal with problems relating to missing files. Electronic versions of dockets²⁷ are created in cases of stolen or missing dockets so as to prevent matters from being withdrawn from the court roll.

Similarly, English-speaking Caribbean countries have set themselves the task of creating a communications environment through which lawyers may contact and exchange information with branches of the judiciary, engage in dialogue and co-ordinate activities. The countries have applied through the Inter-American Development Bank for support from the Italian Government.

An e-Justice system makes it possible to analyse and catalogue the whole canon of judicial material (laws, decrees and sentences). With better access, interested parties acquire the capacity to correlate the judicial material with information from other actors, especially the courts. The system will make judicial procedures more efficient and lower costs. In addition to making it possible to share information and disseminate know-how, e-Justice will also make the system more “coherent”, *i.e.* less dependent on personal interpretation, and therefore fairer.

Details at : www.doj.gov.za/2004dojsite/b_ism/ejustice/20040712_ejustice%20profile.htm;
www.innovazione.gov.it/eng/egov4dev/areegeografiche/caraibi_p1.shtml.

ICTs are a tool that can facilitate development good practice – *e.g.* awareness of issues, lobbying for change and participation in the formation of economic strategies. Good practice in development co-operation will seek to apply tools where appropriate to achieve the goal of ownership and participation in planning frameworks.

ICT enhancing specific pro-poor activities

More pro-poor growth can be achieved by adopting policies and programmes that enable poor people to access human, physical and financial assets that can increase their productivity and incomes – for example, enhanced social services (particularly education and health), land-tenure reform and micro-finance schemes.²⁸

²⁷ “Dockets” mean the sum of legal documents for a particular case.

²⁸ The DAC Guidelines *Poverty Reduction*.

In terms of ICTs which complement specific activities intended to reduce poverty, we return to the role of the economic-planning frameworks. In order to realise the potential contribution to pro-poor growth offered by ICTs, the integration of ICTs into PRSPs will be critical.

ICT can fulfil several Pro-Poor functions: **Enabling** an activity to be undertaken, perhaps by reducing costs so that something can be done which would previously have been too expensive; playing a **facilitating** role in support of development objectives in which ICT per se may not be significant; **creating the opportunity** for a development activity, which was not previously technically feasible; **disseminating** knowledge or expertise; allowing **adaptation to local needs**. (EC)

The inclusion of ICT in PRSPs needs to consider specifically how the integration of ICTs in pro-poor strategies results in a strong poverty focus for ICT development rather than the identification of ICT dissemination as a priority for poverty reduction. (Ireland)

The development of expertise and technological innovation in developing countries cannot be left to the market alone. It is up to the government and NGOs to ensure that the poor can also benefit from ICTs wherever possible. **This can be done by formulating policies with stakeholders that specifically focus on the interests of the poor, by encouraging network operators to channel some of their investments towards regions that are less commercially attractive, by encouraging and co-financing ICT applications that will directly benefit the poor, such as information points in local community centres, and by investing in ICT applications in the public sector – for example, in education and health care** (Netherlands).

The strategy paper “CIDA’s Strategy on Knowledge for Development through Information and Communication Technologies”²⁹ notes that, as women and girls typically have unequal access to ICT, appropriate attention must be paid, through sound gender analysis, to **gender equality**, to the value of women’s knowledge, and to the importance of integrating women into the information society at all levels and in all sectors. DAC members are reminded that addressing the needs of the poor and marginalised, particularly women and girls, is vital,³⁰ and may require special programmes such as the USAID Women in Technology Program.

As we saw above, while PRSPs may include statements and targets on the poverty focus of ICTs, it is the very demand of PRSPs for widespread public consultation on priorities which is one of their most distinctive features, and this can be strongly enhanced by the use of the media and ICTs. PRSPs are being seen by the donor community as key drivers in broadening participation in and expression through ICTs (Denmark). Similarly, ICTs can be used to enhance the application of other pro-poor activities (*e.g.* the use of ICTs in water projects (Netherlands)) and to gain information that can help pro-poor reforms in sectors such as health-service delivery. With the Albanian Patient Care Management System we note that the ICTs provide information for health-sector reform, putting participation and ownership in the hands of the poor.³¹ One of the expressions of globalisation is decentralisation, and where decentralised decision-making increases in pro-poor services, ICTs will play an increasingly important role in co-ordination.

²⁹ Canadian International Development Agency (CIDA) (2003). Details at: www.acdi-cida.gc.ca/INDEX-E.HTM.

³⁰ Consultation with DFID, 2004.

³¹ Details at: www.phrplus.org/countries_alb.html.

Box 11. Cisco Networking Academy Scholarship Program

The Women in Technology, Cisco Networking Academy Scholarship program, sponsored by the United States Agency for International Development (USAID), and administered by the Institute of International Education (IIE) provides scholarship awards to women from target countries to attend the Cisco Networking Academy Program, earning them a Cisco Certified Network Associate (CCNA) certificate.

The Cisco Networking Academy Program is a comprehensive global training program that teaches students to design, build, and maintain computer networks, preparing them for industry-standard certification as networking professionals. The program teaches students valuable Internet technology skills, including networking, Web design, IT Essentials, Cabling, Java and UNIX. It combines instructor-led, online learning with hands-on laboratory exercises where students apply what they learn in class while working on actual networks.

In addition to networking and other technology skills, the program helps students improve math, science, writing, and problem-solving abilities and competencies. The Cisco Networking Academy Program is helping to transform education while preparing youth and adults around the world for career opportunities in Information Technology. The program equips women with marketable high-tech skills essential to participation in the Internet economy, breaks down socio-cultural barriers for women participating in IT careers, and provides women access to skills and employment with which they can both contribute to the development of the IT sector in their countries and ensure their own economic development.

Details at: www.iie.org/wcoast/wit.html.

Box 12. ICTs and agriculture

ICTs have been used to provide farmers and fishermen access to information on weather, soil and crops, as well as up-to-date market and commodity prices. ICTs have also been used to create water maps, enabling villages to estimate monthly demand for water and its availability from various sources, as well as enabling the development of additional water sources and suggesting the allocation of available water in the event of shortages. Another programme can analyse and interpret long-term data to predict pest attacks one week in advance. The majority of these agricultural programmes are funded through a collaborative effort by government agencies, research organisations and NGOs.

Details at: www.riia.org/index.php?id=324 (The Royal Institute of International Affairs).

Box 13. PHRplus project in Albania

The PHRplus Project in Albania provides technical assistance to support the government of Albania to implement health reform. The project approach is a bottom-up, pilot-based effort to produce evidence for informed decision-making, both locally and centrally. The project objective is to demonstrate a sustainable model for the delivery of primary health care at modest cost for replication in Albania. PHRplus' Health Information System (HIS) has provided valuable information for the four primary-health-care sites using the system. Since July 2002, data from over 90,000 encounters have been collected and analysed. In April 2004, the local government asked for technical assistance from PHRplus to implement a similar system in all the urban centres in Berat and Kuçova. The health projects have also made use of Geographical Information System (GIS) in presenting project activities and data collected through their Health and Management Information Systems. PHRplus anticipates using GIS applications to graphically display information from the primary care Health Information System.

Details at: www.phrplus.org/countries_alb.html.

ICTs, livelihoods and ownership

We have noted above the role ICTs can play in giving a voice to the poor in debates that shape planning frameworks. Finally for this section on ownership and participation, we note the role of ICTs in giving the poor more choice in their livelihood options. The essence of the Sustainable Livelihoods Framework (SLF) (DFID 2004³²), which has become a framework for analysing the situation of the poor, is that there are three sets of factors that directly influence the choice of a livelihood. The degree of vulnerability cannot often directly be changed by the poor, although measures can be taken to mitigate its impact on their lives. The capital assets of the poor include not only tangible items covered by physical, natural and financial assets but also social and human capital. The balance between these assets is a key factor in the choice of livelihood. Finally, the institutional context can restrict or enable various livelihood options. The SLF brings these factors together to create an analytical framework proposing the livelihoods that people choose – enabling planners to determine the possible impact of a change in any one component of the framework.

Some commentators have suggested that the model is too reliant on external factors, and that it should include internal, personal motivation as a distinct factor influencing choices.³³ However, despite its limitations, the framework in its commonly used form does indeed recognise that whatever livelihood strategy is chosen, it is a choice made by the people, for the people. Development co-operation good practice states that it is important to allow beneficiaries to assess what is relevant to them (Sida), and thereby own the introduction of ICTs into their livelihood strategy.

Giving voice to the poor and helping them apply knowledge is a key element of combating poverty. (DFID)

It is therefore the direct participation of the population and ownership of projects and new market opportunities that must be ensured. (EC)

Contents of projects must reflect the people-centered approach. (Japan/JICA)

In conclusion, we recognise that there remains a lack of evidence of the value of ICTs to economic development in LDCs. This, and the diverse nature of ICTs, can make it difficult to incorporate ICTs specifically into national planning processes. ICTs can nonetheless help enable economic and social transformation through empowerment of the poor where their use is integrated into planning processes, but only in a **conducive policy and regulatory environment** which provides for ownership and participation. **ICTs themselves cannot create ownership and participation where other factors are not in place** although they can support a virtuous cycle where government openness to ownership and participation in planning frameworks can be supported by ICTs – and in turn the open regulatory framework can create new opportunities for ICT services.

Who works together? (co-ordination and collaboration – multi-stakeholder)

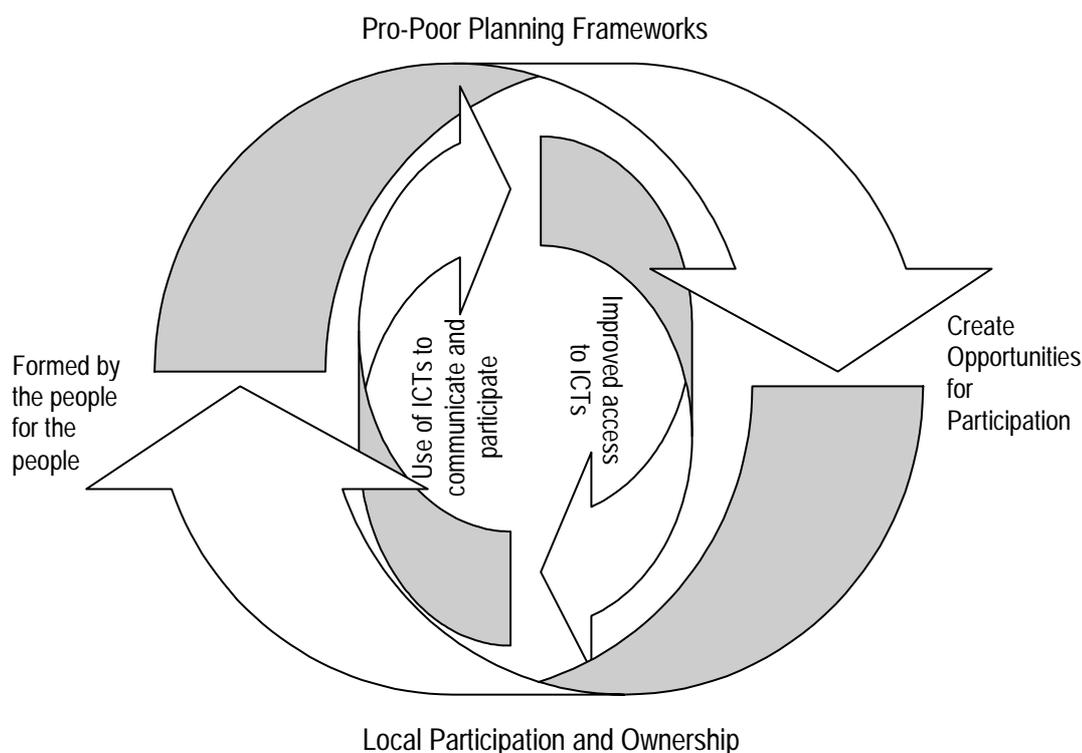
In The DAC Guidelines *Poverty Reduction*, much emphasis is put on forging effective poverty-reduction partnerships. The subject of collaboration and partnerships has to a certain extent been covered by the above discussion on ownership and participation. It is about empowerment of the poor, of “dialogue with and beyond government”, of “marshalling all potential partners to ensure ownership, sustainability and effectiveness”.

³² Details at. www.livelihoods.org.

³³ Batchelor (2002).

ICT supporting the virtuous participation cycle

Figure 5. The virtuous cycle of ownership and participation supported by ICTs



Co-ordination and collaboration have nonetheless been identified as one of the key principles of good practice for integration of ICTs in development co-operation since ICTs have made the way possible for more effective national and international communication. Future development collaboration at all five points of engagement on the ICT axis should be specifically co-ordinated, and the opportunities now offered by ICTs for that co-ordination should be maximised.

In order to ensure ownership and participation, DAC members should encourage multi-stakeholder partnerships and ensure sufficient collaboration. Like ICTs themselves, **multi-stakeholder partnerships** are a means to an end, not an end in themselves.

The focus should be on the strategic combination of complementary resources and competencies of each stakeholder with a shared focus and trust.³⁴

ICT collaboration between agencies and actors

We have noted above that DAC members should collaborate and co-operate to maximise the effectiveness of their development co-operation. When we consider pro-poor interventions, that co-ordination and collaboration should take place in not only at headquarters but also in the field.

³⁴ Summary Record OECD-DAC/SDC Meeting, Geneva, 2004. (OECD 2004g).

But who will drive this collaboration and co-ordination? Unless there are in place other factors that drive collaboration and co-ordination no one will use the tool that ICTs offer – the tool itself cannot provoke and ensure collaboration. In some cases, such as Japan, co-ordination with donors and international organisations has become one of five principles of their development strategy. If such a principle is in place and the political will is available to drive collaboration, how can the opportunities offered by ICTs be maximised?

How can DAC members organise to ensure ICTs are used throughout development co-operation?

Experience suggests that ICTs are often most successfully used within an organisation when championed by a senior individual. Usually that individual is enthusiastic about the technology and/or a vision of how it may be best applied. Such individuals tend to be self-selecting but, when they emerge, can be helped to become more effective by being given knowledge, support and decision-making scope (Denmark). If ICTs are to be integrated into development co-operation for pro-poor interventions, it may be necessary to cultivate and support such champions. Some agencies have established a group of in-house specialists for ICTs for development. Experience to date suggests that groups of this sort can be useful in preventing predominantly hardware-oriented approaches, and can assist agencies to consider the information and communication needs of a programme (Japan/JBIC).

It is important to emphasise that the experience so far suggests that an “ICT group” must have channels of access into mainstream development co-operation, and not be an isolated department undertaking only ICT projects. A balance must be struck between pilot projects that make innovative use of ICTs to explore developmental efficiencies, and mainstreaming where proven applications are used to realise the efficiencies that bring the development community closer to achieving the MDGs. “Development Communication” as a discipline has been available to the development community for many years – for supporting health work, rural extension, community development, etc. It is important that information about ICTs does not get overwhelmed or bypassed by their mere technological wizardry.

Experience seems to suggest that a good model is to create a pool of ICT expertise that can be drawn on as required. Several DAC members suggest that by having a team of specialists, based either in the field or at headquarters, who themselves do not have a budget for projects, the call for ICT expertise is demand-led and proven by a willingness to pay among programme managers.

For instance, the USAID/Tanzania “I-Team” demonstrates how ICTs have been incorporated into the day-to-day operations within USAID.³⁵

Box 14. USAID/Tanzania “I-Team”

Information and Communications Technology (ICT) holds great potential for furthering USAID/Tanzania's development objectives. To capitalize on this potential, the Mission is implementing the ICT Initiative, which will fully integrate ICT into USAID/Tanzania operations, projects and programs. The Initiative is first focusing internally, working to build internal ICT capabilities and awareness; develop a Mission Communications Program; and develop a Mission ICT Strategy. These activities will serve as a springboard for the Mission to integrate ICT into its development programs and operations. To facilitate and coordinate the Initiative, the Mission has formed an ICT team (“I-Team”), consisting of internal representatives from each USAID office or team (e.g. health, natural-resource management). These team members serve the dual purpose of bringing knowledge of, and seeking synergies between, office/team needs and activities in relation to ICT; and taking knowledge gained through “I-Team” activities and capabilities back to their respective office or team.

³⁵ Details at: www.usaid.gov/tz/ppg7.html.

Do we have the skills? (capacity building)

As the extract of The DAC Guidelines *Poverty Reduction* below suggests, development co-operation very much depends on the capacity, human and institutional, for its implementation.

The intersection between ICTs and capacity building includes four main points:

- Building capacity within the DAC community for collaboration and multi-stakeholder partnerships (as described above)
- Building capacity for handling Information and Communication **Technology**
- Building capacity for the flow of information and communication within development co-operation
- Using ICTs to build capacity within development co-operation for any subject area.

Building capacity through strategic partnerships

Capacity building is now recognised as critical to the effectiveness of development co-operation. The DAC Guidelines *Poverty Reduction* set out the following priorities (among others) for bilateral agencies working with partners to reduce poverty:

- Work more intensively to develop human and institutional capacity in partner countries.
- Ensure a gender perspective in all policies, programmes and instruments.
- Assess development co-operation for its impact on poverty and develop the requisite monitoring and evaluation systems and methodologies.
- Foster and strengthen local capacities to monitor poverty-reduction programmes and the use of external and domestic resources in the context of debt relief programmes.
- Encourage the development of local poverty-reduction indicators and targets – and strengthen local statistical, analytical, monitoring and evaluation capacity.

Multi-stakeholder partnerships (MSPs) can be an effective tool. Perhaps one of the most effective of them has been the clearing house for information – the Global Knowledge Partnership³⁶ (GKP), although even the GKP notes that MSPs are not suitable for all situations.

It is crucial to define the roles, responsibilities and expectations of each partner.³⁷

The CIDA, like a majority of donors, recognises the importance of engaging in global and international **policy dialogue to share knowledge and best practices** and to influence policy work in the ICT sector. ICTs themselves can assist in this co-operation and collaboration. The establishment of an independent, non-profit organisation such as The International Institute for Communication and Development (IICD) might be considered as a good practice that donors could replicate in the future (The International Institute for Communication and Development, Netherlands).

³⁶ www.globalknowledge.org.

³⁷ Summary Record OECD-DAC/SDC Meeting, Geneva, 2004. (OECD 2004g).

Box 15. International Institute for Communication and Development (IICD)

The International Institute for Communication and Development (IICD) assists developing countries to realise locally owned sustainable development by harnessing the potential of information and communication technologies (ICTs). IICD works with its partner organisations in selected countries, helping local stakeholders to assess the potential uses of ICTs in development. They also strengthen the capacities of the local partners to formulate, implement and manage development policies and projects that make use of ICTs. The philosophy is that ICTs are tools that can contribute to sustainable development and poverty alleviation. However, this only applies when ICTs are supporting existing development activities. Therefore, they focus on “traditional” development sectors, such as education, governance, health, livelihood opportunities (especially agriculture) and environment.

Details at: www.iicd.org.

Building capacity for handling information and communication technology

With respect to ICTs at almost any point along our spectrum of engagement, if the enabling environment is on the agenda and the private sector is expressing interest in the opportunities for infrastructure and service provision, the process of **realising the agenda** and the opportunities still very much depends on the capacity of developing/transition countries to take up those opportunities. **Capacity building** is held to be central at all stages.

For example, regulators must keep up to date with the rapid pace of technological change and evolving commercial opportunities, the private sector requires the human capacity to implement and maintain services, and customers (from the public, private and informal sectors) have to be able to use services.

Note that the actual requirements of capacity building are strongly determined by the technology used and its appropriateness. For instance, semi-literate users all over the world are “capable” of using telephones (and SMS). This introduces Principle 6 – Is it appropriate?

Box 16. Cases of building capacity for ICTs

Makerere University in Uganda is the host institution for the African-led network of institutions actively strengthening African expertise involved in setting ICT-related policy. Makerere University Faculty of Law (MUKLAW) is a member of the partnership establishing the Collaboration for International ICT Policy for Eastern and Southern Africa (CIP ESA) and is hosting CIP ESA.

Details at: www.makerere.ac.ug.

NetTel@Africa seeks to strengthen the capabilities of policy-making and regulatory bodies, private-sector operators, consumer advocacy groups and academic institutions that can assist with sustained capacity building in the ICT sector.

Details at: www.nettelafrika.org.

Building capacity for the flow of information and communication within development co-operation

For information provision to be useful in pro-poor activities, organisations, individuals and communities require the ability to use, maintain and fully benefit from the information and communication opportunities (CIDA). The ability to use them is to a certain extent based on the

technology, but not wholly so. Development communication is a discipline in itself, and the flow of information and communication must be considered regardless of the specifics of the technology. Can people find the information they require, and is it appropriate? How does the information affect their lives? Do they trust the source?

Using ICTs to build capacity within development co-operation for any subject area

ICTs also offer new opportunities for building capacity – both in ICTs themselves, but more importantly in supporting other general drivers of economic growth by building capacity in other sectors. Many DAC members note that it is the capacity to produce and use knowledge and information that is an important driver of growth, and this capacity has to be developed. ICTs can act as an instrument and resource for capacity-building, innovation, information exchange, transparency and accountability (Ireland).

Good governance has been identified as a driver of change, as the example of the e-Justice programme in South-Africa illustrates. Similarly, the instance of the University of South Pacific in co-operation with Japan, New Zealand and Australia is an example of educational interventions that support an inclusive environment.

Box 17. University of the South Pacific (USP)

The University of the South Pacific (USP) is the premier provider of tertiary education in the Pacific Region, and an international centre of excellence for teaching and research on all aspects of Pacific culture and environment. The catchment area for the University of the South Pacific is enormous, stretching across 33 million square kilometres of ocean and five time-zones. The university is considered a pioneer in the field of distance-learning. Its own satellite link, USPNet, allows students on remote islands to follow lectures on its main campus in real-time. “Normally people would have to travel to a main urban area or in the case of degree study, they would have to travel to the main campus”, says Acting Vice Chancellor Professor Chandra. “They would either have to go to another island or another country to study. With this new system, you will have access to education in your own village, in your own home and with the flexibility that you study when you want to study.” The University aims to deliver all courses in this way by 2020. But its ability to fulfil that dream depends partly on the expansion of telephone and internet services throughout the Pacific. Some 700 out of the 900 villages in the Fiji Islands – one of the region's more developed states – still lack a basic telephone service.

Details at: www.usp.ac.fj/dfi.

Will the situation continue? (sustainability)

DAC members are committing themselves to work with more resolve to reduce poverty in solidarity with poor people and in the interests of securing universal human rights. They will be working to ensure the centrality of sustainable poverty reduction in development co-operation and to integrate economic, social, environmental and governance concerns within comprehensive approaches to development at the country level.³⁸

Given the nature of the role of ICTs in development co-operation – keeping the enabling environment in place, encouraging private-sector provision of ICT services and putting in place the capacity to take up the new opportunities – complying with the above statement is like aiming at a continually **moving target**; it is necessary to adapt continuously to a rapidly changing context. ICT is one of the fastest changing sectors in the world, with new technologies continually being developed.

³⁸ The DAC Guidelines *Poverty Reduction*.

The capacity of the world to use the potential of ICTs is continually changing, often in unexpected ways. For instance, Africa has one of the lowest provisions of telephones per person in the world, yet research suggests that up to 80% of households in typical rural districts make some regular use of telephones. If one had discussed this even four years ago, virtually no one would have believed that the mobile phone would have had such a rapid uptake in Africa.

The outcome of projects should be built to last, avoiding over-dependence on external resources. Nevertheless, some DAC members point out that donors should seek to eliminate a mentality that does not extend donor-supported ICT initiatives beyond the pilot stage. Donors and international organisations should take a longer-term and a clearly sustainable approach to ICTs for development. At the same time donors should be cognisant of the fact that sustainability introduces a series of complexities that are not inherent in simpler pilot-project initiatives (CIDA).

This pace of change is a challenge for DAC members (Japan/JICA). The world itself is being changed as a result of ICTs. The knowledge of the donor community on how ICTs should be used for the benefit of developing countries is likewise changing. This makes considerable demands in terms of continuous organisational learning and an open attitude (Sida). In order for DAC members to provide gradual step-by-step support, they should continuously renew their own information systems to be aware of technological innovation and its implications (Japan/JBIC). In particular DAC members noted that the project cycle is too long to respond correctly to a swiftly changing scene.

Finally, it is worth remembering that ICTs for development issues have to be considered in a **broader development context** (SDC). It is essential to use the UN Millennium Development Goals (MDGs) to ensure ICT programming targets the poor. Poverty is not about the lack of basic needs like money, housing or food. It is about a recurring cycle where individuals and communities lack influence and are unable to make the appropriate choices for themselves because of their lack of access to knowledge, because of their inability to access government and other social services, etc. This cycle has to be broken. It is obvious that ICTs can have a particularly significant impact towards the sustainable breaking of this poverty cycle (CIDA). Creating information-rich societies is a key element of poverty reduction and sustainable development (DFID). The focus is on the role of Information and Communication for Development (ICD) in achieving the MDGs as an integral part of DFID's partners' development objectives, and on empowering the voice of the poor (DFID).

ICTs and the private sector

The extent to which the private sector is engaged is generally a good measure of sustainability, at least in financial terms. It is also particularly proficient at adapting to changing circumstances – particularly relevant in the ICT sector. The private sector plays an especially important role in delivering ICT-based services, both in constructing infrastructure (notably telecommunications) and in delivering services sustainably across that infrastructure. Although ICTs exhibit many characteristics in common with other infrastructure sectors, it is unique in regard to the speed of change in the industry, which means that the private sector tends to work with relatively short investment horizons;³⁹ nevertheless, international companies have demonstrated that telecommunications networks can be operated profitably. The ICT market is segmented, with different customers requiring different services (and having differing abilities to pay), which provides opportunities for local entrepreneurs to develop niche markets.

³⁹ Engvall and Hesselmark (2004).

The old model of the state-owned and -managed telecommunications monopoly adopted in the second half of the nineteenth century simply does not accommodate the fast-changing, knowledge-based, and global information revolution. (USAID)

DAC members tend to favour developing and stimulating the private sector in order to encourage investment. (EC)

Multinational companies, particularly the telecommunications operating companies, have a profile in developing countries – logos can be seen at retail outlets and on scratch cards. Companies are often operating as foreigners and are aware of the importance of creating a positive image with the regulatory authorities as well as among customers. Many have large corporate social-responsibility budgets. There is also momentum in corporate circles towards incorporating social and development goals into operating practice. These resources can be most effective if coordinated, and if deployed in collaboration with development co-operation stakeholders.

Small markets with limited competition (and large markets with poorly regulated competitors) can lead to monopolistic practices. In order to attract private-sector operators, the ICT sector requires transparency and effective regulation (and enforcement). Policy-making and regulatory processes should canvas and accommodate the opinion of all sectors of the ICT industry through (for example) consultation exercises.

The danger of non-transparent processes is that the limited availability in developing-country internal markets of adequate hardware and software services raises costs, threatens the technical sustainability outside of a limited geographical area and often exposes purchasers to monopolistic practices. (Ireland)

If the private sector is to be the main vehicle for ICT infrastructural roll-out, there needs to be a fair and transparent regulatory and policy framework to secure and promote private-sector involvement. (CIDA)

In addition to their role as rule-makers, governments are also concerned with private-sector development, and ICT is emerging in some countries as a significant economic sector. In other infrastructure sectors, governments have often played a key role in public-private partnerships, especially where they have responsibility for service provision and where they are responsible for financial management (with soft loans, for instance). This is not generally the case for ICTs,⁴⁰ but they can play a role in developing new ways of engaging with the private sector in pro-poor service delivery through conventional client-contractor type partnerships.

Box 18. A private sector example: ITC Limited India

An example illustrates how this can happen. ITC is one of India's leading private companies, with annual revenues of USD 2 billion. The company has initiated an "e-Choupal" effort that places computers with Internet access in rural farming villages. What began as an effort to re-engineer the procurement process for cropping systems in rural India has also created a highly profitable distribution and product-design channel for the company. The e-Choupal system has said to have catalysed rural transformation that is helping to alleviate rural isolation, create more transparency for farmers, and improve their productivity and incomes. In mid-2003, e-Choupal services reached more than 1 million farmers in nearly 11 000 villages.

Details at: www.echoupal.com.

⁴⁰ Exceptions include rural communications funds. See OECD (2004j).

Given the success of the private sector in developing ICT infrastructure in developing countries, most donors have abandoned supporting ICT infrastructure, preferring to leave that to the private sector. So what is the most appropriate role for donors? There is a growing recognition of market failures, notable examples being the importance of providing universal access, and the high cost of Internet connectivity in some countries. Contributing factors include:

- Political reluctance to change – governments have a vested financial interest in protecting operations of the incumbent telecom company, where it remains state-owned.
- Lack of capacity amongst decision-makers – often responsible for reluctance to open markets up to new technology, as with the Voice over Internet Protocol (VoIP).
- Structure of industry – vertically integrated operators (especially incumbents) remain reluctant to allow competitive use of infrastructure; international competition can be constrained where an incumbent maintains a monopoly on international gateway.
- Size of markets – small markets can only support core infrastructure provided by one operator, whereas larger markets can support parallel, competitive infrastructure services.

Donors could, therefore, work to address areas of market failure, although these conditions are often accompanied by factors such as corruption and incompetence that tend to deter investment. Nevertheless, donors could meet the need for risk-funding. In poor countries it is likely that some form of donor-supported funds will be necessary to subsidise pro-poor service provision (both infrastructure and service delivery) where internal subsidies within tariff structures would not be feasible. There are opportunities for delivering pro-poor services for the public good, rather than for profit, which can only be realised with funding from donors or government. DAC members agreed that re-engaging in financing ICT infrastructure due to the market failure requires careful consideration.⁴¹

The role of aid needs to be revisited. Most developing country policies and regulations are now skewed towards the private sector. There is a definite need to develop and implement policies and regulations that create a better balance between private sector and pro-poor social development. (CIDA)

The falling cost of technology presents opportunities for decentralisation of services, especially in telecommunications. This, and a range of emerging technologies, is stimulating interest in local participation in providing universal access. Yet these approaches require open access to core infrastructure. These arguments are supported by the convergence of voice traffic and data traffic, which is already designed to achieve the transparent interconnection of networks. In low-traffic countries, it makes more sense to invest in a single network rather than to invest in competing networks, which will target the same profitable segments of the market.

Private-sector operators tend to view development agencies with some suspicion. Donors can play an important role in finding new ways in which development co-operation stakeholders can work with the private sector. To make an effective contribution to pro-poor development, the private sector has to be engaged. Nowhere is this more evident than in the Small and Medium Enterprise (SME) sector. The report *ICT, E-Business and SMEs*⁴² suggests that donors should:

⁴¹ Summary record OECD-DAC/SDC Meeting, Geneva, 2004.

⁴² OECD (2004b), p. 6.

Move beyond policies for basic connectivity and ICT readiness to facilitate more widespread uptake and use of complex ICT applications and e-business uptake by small firms. Target programmes where there are demonstrated market failures (*e.g.* R&D incentives, frameworks for standards, skill formation, information and demonstrations on best practice and benefits from adoption and use of ICT), taking into account that commercial considerations and returns drive business adoption of new technologies.

The Summary Record of Second Workshop of the Infrastructure for Poverty Reduction Task Team⁴³ notes that “Even private sector investments need donor intervention to be more pro-poor”, and for this to be successful donor intervention should still adhere to development co-operation good practice – ownership, participation, collaboration. Failure to do so can reduce the effect of donor interventions:

Some experience such as the IT&C and Asia-Invest programme of the EC noted in its mid term review that the programme included inherent difficulties in operating programmes designed to benefit private sector companies – but without their direct participation – and the challenge of designing coherent sustainable instruments to meet broad and mixed objectives.⁴⁴

How do we keep learning? (monitoring and evaluation)

Assess development co-operation for its impact on poverty and develop the requisite monitoring and evaluation systems and methodologies (The DAC Guidelines *Poverty Reduction*).

Given this ongoing rapid change and the challenge it produces, integration of ICTs in development co-operation depends on the provision of accurate and timely information. The lack of proper, sound **evaluation** has resulted in a patchy collection of anecdotes. Most DAC members feel that the same examples are repeated with very little clear evidence of the genuine impact of ICTs on development objectives and pro-poor growth. To overcome this, mechanisms should be developed to focus on the results and outcomes of the application of ICTs in the wider development context, not on inputs and the technology *per se* (Sida).

Box 19. Gyandoot

Gyandoot is a much-quoted programme which has pioneered a model for “soochanalays”, an intranet-based Government to Citizen (G2C) service-delivery portal in Madhya Pradesh in India. However, despite the encouraging anecdotes, the evaluation offered by AusAID dated 2002 states “The CEG-IIMA team travelled to 23 of the 32 functional soochanalays and covered 7 out of the 9 blocks, where Gyandoot has been implemented (2002). [...] There were practically no users at the soochanalays on all the days of the survey. The study team had to travel to common meeting points in the villages to locate the users of Gyandoot services. With considerable effort, the team could locate 32 users in all and obtain responses from them [...]. The team could not get the data on transactions registered on the Gyandoot’s Intranet server in spite of its repeated requests to the project manager. The data registered in the logbooks at individual soochanalays are used as representative data for Gyandoot service transactions. Due to these factors, amount of data collected was very limited, and was too inadequate to subject the conclusions to any statistical validity”.

Source : CEGIIM (2002).

⁴³ OECD (2004f).

⁴⁴ EU-Asia (2004).

There is a clear call among DAC members for more rigour in the monitoring and evaluation of ICT-related projects, and a need for a clearing house or mapping exercise to identify what we know and what we don't about the role of ICTs in development co-operation. Yet a word of caution must accompany such a call. In the ownership and participation section above, we discussed how ICTs could support a virtuous cycle of ownership and participation. ICTs can support such development co-operation good practice, but is not the driver of such good practice. This paper has been about the integration of ICTs in development co-operation, and we have seen that it is the extent to which such co-operation adheres to the good-practice principles in its overall programme design that will determine its progress towards the MDGs, and its support for economic and pro-poor growth. ICTs will only form a small part of overall co-operation design, and cannot in themselves be the initiator or the driver of a virtuous cycle.

When we come to analyse a development programme that includes ICTs, there should be a framework and mechanism to distinguish the contribution of the ICTs in the context of the overall programme design. For instance, an absence of clients at a information centre may be due to inappropriate information availability or inappropriate technology (it may be too difficult to use, for example), but it may also be due to poor management of the centre, patronage that excludes the marginalised, the way the centre was set up, the process of the development co-operation.

There is no complete understanding yet of how ICTs contribute to poverty-reduction.⁴⁵ Basic guidelines for ensuring that ICTs are used effectively for poverty reduction are still lacking (CIDA). To create that understanding and develop the guidelines, systematic monitoring and evaluation of ICT-related projects needs to be embedded in project design.

Is it appropriate? (appropriateness)

This last section does not relate directly to The DAC Guidelines *Poverty Reduction*. It is a section that our broader experience in development interventions and our limited experience in ICTs have determined. In these few paragraphs we draw attention to some basic rules of thumb concerning ICTs:

- Simple is often the most effective.
- Appropriate technology depends on the circumstances.
- Cost-effectiveness is a core concept.
- Innovative methods of access will be required for pro-poor applications.
- Content and applications are more important than technology.
- Sometimes the innovation of the poor will outpace development co-operation.

Simple is often the most effective

Different technologies have different uses and potential (most donors). For example, in reaching rural populations simple technology, such as radio, may be more effective than more complicated high-technology solutions requiring large capital costs (CIDA). No single technology is a magic bullet or suitable to all requirements – each ICT (old and new) will be appropriate in different circumstances

⁴⁵ Summary record OECD-DAC/SDC Meeting, Geneva, 2004 (OECD 2004g).

(DFID). It is important to adequately appraise ICT applications and match these new technologies to specific local circumstances (Netherlands).

Another example of ICTs providing specific information that enhances a more general development co-operation is Guinea GIS for Natural Resources Management. Here GIS has been used to monitor and improve the radio signal throughout Guinea, ensuring its population even in the remotest of areas has access to educational (and entertainment) services through the radio.

Box 20. USAID/Guinea

USAID/Guinea, in co-operation with the Guinean Ministry of Education, has recently completed a two-and-a-half year geographic survey of all public, private and community schools at all grades throughout Guinea. Combined with the Ministry's existing statistical database of primary and secondary schools, the survey adds a spatial dimension to analysing and planning the distribution of education resources in Guinea. Rik Baeyens, GIS Specialist for USAID, writes that: "We thought that there were 10 000 villages in Guinea, based upon the previous data. We then discovered that there were some 35 000 villages. The new findings will have quite an effect on everyone's development statistics". With the information provided by the survey on the location of schools, particularly in relation to surrounding villages, the Ministry of Education and its partners will be able to better plan and prioritise where new primary schools, middle schools and high schools should be built, and where existing schools should be extended, so that all areas of the country are adequately served according to the distribution of the population.

Box 21. Interactive radio instruction in Haiti

The Haiti Distance Education Inside and Beyond the Classroom Project follows two USAID distance-education initiatives in Haiti, designed to improve educational quality in a country where many teachers lack training and support. Working with the Haitian Foundation for Private Education (FONHEP) strengthens and expands Interactive Radio Instruction (IRI) in Haiti. IRI allows teachers and students to follow programmes via radio that use games, songs, dramas and other activities to assist teachers in the instruction of educational objectives from the curriculum. The official language of instruction in Haiti is Creole and the lessons provide solid instruction in a language that many Haitian teachers have not mastered in its written form but are nonetheless expected to use as the language of instruction.

Details at: www.usaid.gov/gn/infotechnology.

Box 22. HIV/AIDS and community radio communication for development in Mali

Objective: Accelerate development by making information accessible through innovative communication techniques and appropriate tools. Focus on convergence of high-and low-technology. Info/Comm introduced technologies (such as the Internet and rural radio) to Mali, while Com/Dev builds on this base. Leverages funding from partnerships and alliances. Introduces newly-emerging digital technologies (e.g. WorldSpace, VITASat, etc.) to make information more accessible. Takes advantage of new regional telecommunications regulatory policies.

Details at: <http://mali.viky.net/usaid/cgi-bin/index.pl>.

Innovative methods of access will be required for pro-poor applications

Telecentres in various forms (cybercafes, computer labs, business centres and so on), developed with local partners and often based on commercial principles, are important means of ICT access in the developing world. Demand for telecentre services is often present but frequently has to be uncovered and nurtured through special programmes (USAID). Outside the main urban centres, innovative technical solutions must be applied to overcome problematic telecommunication links. Both terrestrial and satellite wireless technologies hold particular promise for reaching the greatest number of rural areas (USAID).

Where half of the world's population lives on less than USD 2 a day and the cheapest PC still costs USD 500, institutions rather than individuals will more likely serve as the means of providing affordable access to ICT. (USAID)

Box 23. Village phones in Uganda

The Grameen Technology Center is replicating the success of the Grameen Village Phone Program in Bangladesh. In rural villages where no telecommunications services have previously existed, cellular phones are provided via a sustainable financing mechanism to very poor women who use the phone to operate a business. The Grameen Technology Center has initiated the replication, establishing a joint venture with MTN Uganda to create MTN villagePhone. Over 700 village phone businesses are now up and running in remote villages of Uganda with more being added every day.

Details at: <http://tech.gfusa.org/villagepayphone.shtml>

Content and applications are more important than technology

We should give more emphasis to **content and applications**. As donors we should also become more involved in associated issues such as intellectual property and open-source software, social-service applications like government-support programmes, income-generating applications and schemes like import/export and customs-related information, cultural strengthening like local language services, etc. (CIDA). It is important to ensure that content is tailored to local users – e.g. languages, subjects, images used on an Internet site (EC). Currently, 68 per cent of the content on the Internet is in English – people not familiar with Internet languages cannot take advantage of the vast amount of available content and applications (USAID). Addressing these cultural content and application issues will support pro-poor growth and livelihood strengthening.

Box 24. TALCs in Bolivia

JHPIEGO, a Bolivian health NGO, is supporting the development of technology-assisted learning centres (TALCs) for its reproductive-health trainers and faculty. The aim of these learning centres is to provide trainers and healthcare professionals with the latest reproductive-health information technology and link members of JHPIEGO's trainer network. This project brings computers, CD-ROM-based learning packages, computer-user training and reliable access to e-mail and the World Wide Web to trainers.

Details at: www.jhpiego.jhu.edu/global/talc.htm.

Sometimes the innovation of the poor will outpace development co-operation

Finally, while we have discussed development co-operation and the integration of ICTs, it may be worth finishing on a note of praise for the poor. What do we know about how the poor are adapting the new technologies without development co-operation? Projects such as Grameen Village Phone (in Bangladesh and Uganda) are presented as potential breakthroughs in both facilitating the income of marginalised women, and in providing a valuable service to the otherwise isolated villages. But evidence suggests that in Mozambique, where no such project has been undertaken, the rural poor have already generated entrepreneurs who hold the “village phone”. Studies suggest that a single phone in a village becomes the conduit for strategic calls, a small business, and a source for market data. Projects that are supporting text-messaging services providing market data, such as Manobi or Cyber Shepherds in Senegal, offer a valuable and cheap mechanism for obtaining up-to-date market data. Yet again, studies show that where a phone is available, and even where text-based services are not available, the phone is used for obtaining market data (by voice) and that such data are shared among village farmers. Donor-led interventions may seek to reduce the costs to the user of data services, but this section draws attention to the resourcefulness of the poor, and seeks to put the integration of development co-operation in the context of local markets and local resourcefulness. One final example is airtime trading. DAC members have only begun to explore the use of new technologies to support the extension of financial services to the rural poor. Meanwhile in Uganda and Kenya, amongst other locations, the poor have begun to use airtime as a mechanism for money transfer. The code for airtime purchased in an urban centre may be sent by text to a rural area, where the receiver accepts the airtime as payment for goods. These spontaneous applications support the premise that DAC members have to find a better balance between the “soft” and the “hard” aspects of ICTs.

Box 25. ICTs and the Asian Tsunami

The devastation brought by the tsunami that struck the coastal communities of several Asian countries on 26 December was made even more tragic as news began to break of how a small number of technicians, monitoring the progress of the waves across the seas using the latest ICT systems, had found themselves unable to warn communities standing in harm's way.

This was not the case with Vijayakumar Gunasekaran, a 27-year old son of a fisherman from Nallavadu village, Pondicherry, on the eastern coast of India, who works in Singapore. Vijayakumar followed the news of the earthquake in Aceh, Indonesia, as it unfolded over the radio and television in Singapore. He decided to phone home. He asked his sister to quickly leave their home and to also tell other villagers to evacuate the village. Her warning reached a couple of quick-thinking villagers who broke down the doors of the community centre set up by the M. S. Swaminathan Research Foundation (MSSRF) where a public address system used routinely to announce sea conditions to the fishermen was housed. The warning from Vijayakumar, corroborated at this time by a second overseas telephone call from Gopu, another villager working abroad, was broadcast across the village using the loud-speaker system. The village's siren was sounded immediately afterwards for the people to evacuate.

No one was killed in this village as a result of the timely warnings. Nallavadu is home to 500 families and about 3,630 people. While all lives were saved, the tsunami destroyed 150 houses and 200 fishing boats in the village, according to the MSSRF.

Source: Chin Saik Yoon, Penang, Malaysia, December 2004.

Conclusion

This chapter presented the challenges and opportunities arising from the intersection of the DAC principles of good practice in development co-operation with ICT engagement in the processes of economic development (including pro-poor growth). It has shown that without good practice, development co-operation is likely to fall short of its target, including its targets for the Millennium Development Goals (MDGs). The integration of ICTs in itself will not provoke adherence to good practice.

But ICTs can support good practice. It is particularly suited to the practice and processes surrounding ownership and participation. Inclusion of the voice of the poor in planning frameworks can be facilitated by ICTs; the image used above is one of a virtuous cycle of ownership and participation. ICTs are not a necessary part of the cycle, and cannot form the cycle – but they can support it.

As the development of ICTs continues at a rapid pace, the development community will face ongoing challenges regarding the integration of ICTs into development co-operation. There are dangers regarding the distraction of resources, and the provision of technology without capacity. There are opportunities for improved ways of working, and for making cost-savings through improved efficiencies. As the development community considers how to mainstream ICTs in its development co-operation the focus of the question “How can ICTs be integrated into development co-operation?” should now be “How can ICTs support development co-operation good practice?”

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Chapter 5

Conclusions and Recommendations

Chapters 2 and 3 presented the contribution of ICTs to pro-poor growth (PPG) and to achieving the Millennium Development Goals (MDGs) respectively.

The main conclusion regarding PPG revolved around the desirability of more data. It seems that, until evidence to the contrary is found, the impact of investment in ICTs is likely to follow the normal pattern of essentially driving macro-economic growth. There is a growing body of evidence linking investment in ICTs to economic growth, but little convincing evidence on the links to pro-poor growth in particular.

One of the most appropriate ways to generate the data required, and to act in the interim, is to follow good practice in development co-operation by using the PRSP **processes** to include an analysis and comment on the role of ICTs – not simply as ICT as a sector within the economy but as a tool that can complement other factors in pro-poor infrastructure, private-sector development and rural livelihoods. Chapter 2 concluded that donors should pay more attention to an enabling pro-poor environment in ICT-related regulations and policies.

In practical terms, where ICTs have been highlighted in the PRSP, donors should seek to support some **linked infrastructure programmes for rural areas** (for example, extending the mobile-phone network into areas where new rural roads are built). Since rural livelihoods and education are said to be win-win investments, resources intended to be stimulation of PPG, and which are ICT-orientated, should be **concentrated on rural livelihoods and education**.

In considering the contribution of ICTs to achieving the MDGs, Chapter 3 focussed on the three key processes that lead to the MDGs and which ICTs can in some circumstances enhance. The question for policy-makers was said to be no longer whether ICTs can be used or not; they can. Three questions now follow. Should they be used? Which is the best strategy for enhancing livelihoods, for increasing delivery efficiencies and for improving planning processes? And is the most effective strategy one that includes ICTs? ICTs do not have to be treated as a separate path to achieving the MDGs but as a tool to enhance the key processes.

Having taken this approach, chapter 3 presented some realities that must be faced by donors, namely:

- **Capacity** in effectively using ICTs for development and useful content are often the main constraints, not equipment.
- Within the time frame of the MDGs (2015), digital devices with **simple interfaces** will therefore be the main tool in the field.
- The **private sector** is instrumental in expanding ICTs for development access, but other players (governments, civil society, etc.) should lead on applications.

- **Development of “developmental” content** on and through such devices should be a priority for donors. This development should not occur in the “ICT sector” but within the sectoral response – education, health, governance.
- Incorporating ICTs into the planning of development interventions requires an **analysis of “with” and “without” scenarios**, which requires more rigorous analysis of the possibilities of replicating and scaling current pilots.
- For a more rigorous analysis, **more data** are required on the linkages between the use of ICTs and the impact on the MDGs⁴⁶.

Chapters 2 and 3 conclude with these recommendations, leading to a consideration of “good practice” on the integration of ICTs in development co-operation.

Chapter 4 presents six key concepts which can be derived from both the conclusions of the previous chapters and The DAC Guidelines *Poverty Reduction*:

- **Ownership and Participation** through participatory planning processes to ensure pro-poor use of the ICTs.
- **Co-ordination and collaboration** – the use of multi-stakeholder processes to ensure efficiencies and the importance of matching private- and public-sector initiatives.
- Though **capacity building** is an overused phrase within the development community, it is nevertheless a vital key to progress towards the MDGs.
- **Sustainability** – for ICTs to contribute to achieving the MDGs they must be scaled and replicated before 2015, implying that their roll-out and use is sustainable.
- **Monitoring and evaluation** should generate the data required.
- **Appropriateness** – in order to reduce the need for technical operation and maintenance capacity and to enable the consumer ease of use, ICTs should focus on presenting appropriate content on appropriate devices.

ICTs are not a special case that can ignore the general principles of development co-operation (represented in The DAC Guidelines). Indeed, the current experience of ICTs strongly suggests that without good practice, development co-operation is likely to fall short of its target including its targets for the MDGs. The integration of ICTs into development co-operation in itself will not provoke adherence to good practice, although ICTs can indeed support good practice – and they are particularly suited to the practice and processes surrounding “ownership and participation”. The inclusion of the

⁴⁶ There is a process of data capture that is being proposed under the theme “measuring the information society” as a follow-up to the World Summit on the Information Society (WSIS) Geneva 2003 and as a lead-up to WSIS Tunis 2005 and beyond. It is an international partnership of major organisations such as UNCTAD, ITU, UNESCO and OECD. One of the key propositions is that the data becomes a part of the national statistics gathering of governments. In the context of Chapter 4, it is the integration of these data into national planning processes that is important. Details at: <http://measuring.ict.unctad.org>.

voice of the poor in the planning frameworks can be facilitated by ICTs, in a virtuous cycle of ownership and participation. ICTs are not an indispensable part of the cycle, and cannot form it on their own – but they can support it.

Chapter 4 concluded that, as the development of ICTs continues at a rapid pace, the development community will face ongoing challenges in the integration of ICTs into development co-operation. There are dangers that resources may be distracted and that the technology provided may exceed what its users can handle or may require. New ways of working and new forms of cost-effectiveness can be devised. As the development community considers how to bring ICTs into the mainstream of its development co-operation, the focus of the question “How can ICTs be integrated in development co-operation?” should now be “How can ICTs support development co-operation good practice?”

All development interventions should be examined to see to what degree they are appropriate. The appropriateness of ICTs is a particular issue. For instance, the rapid expansion of mobile telephony has been driven by demand. The telephone is a device which suits the voice culture of the poor, does not require much technical literacy, offers a variety of payment mechanisms that suit the flexible finances of the poor (including text as a cost-effective alternative to voice) and which is battery-operated, almost eliminating the requirement of access to the electrical grid. Where such appropriateness fits the livelihoods and culture of the poor, there will be an uptake of ICTs, which can be sustained by the private sector. There is also a demand for content and applications of ICTs that are appropriate to the context and circumstances of the poor.

Recommendations

We finish by returning to the two groups of potential readers.

To the ICT enthusiast, the recommendations are:

- More data are required on the impact and effectiveness of using ICTs to support PPG and the deliver of pro-poor services.
- The efficiencies and increased effectiveness in mainstream development co-operation that ICTs can provide has to be demonstrated, particularly where they are competing for scarce resources.
- When considering the introduction or extension of ICTS, it is the potential impact on pro-poor growth or on the processes which lead towards the MDGs that have to be presented and discussed, not the development of ICT infrastructure *per se*, or ICTs as a goal in themselves.
- Programmes seeking to integrate ICTs in development co-operation must adhere to good-practice principles on ownership and participation, co-operation and collaboration, and capacity-building, if they are to have any measure of success.
- Co-operation with the private sector is particularly pertinent for increasing ICT access, although synergies with other sectors should also be sought.
- The user interface should be matched to the clientele capacity, and the relevancy of content ensured, whatever the ICT used.

To the donor, government or development practitioner, especially those yet to be convinced about the role of ICTs, the recommendations are:

- The impact and effectiveness of using ICTs to support PPG and the deliver of pro-poor services should be continually assessed – rapid changes in ICTs can offer new ways of working.
- There should be continual assessment of whether ICTs can produce efficiencies and increase effectiveness in mainstream development co-operation, particularly where there are scarce resources and ICTs may create savings.
- ICTs will have an increasing role in the practice of development co-operation by virtue of their increasing role in day-to-day life and so should not be ignored – they will increasingly impinge on the life of the poor.
- Development co-operation seeking to adhere to good-practice principles should consider how ICTs can support and enhance practices such as ownership and participation, co-operation and collaboration, and capacity-building.
- Co-operation with the private sector is particularly pertinent for increasing ICT access, but synergies with other sectors should be sought.
- Planning tools – such as the PRSP process – should include an analysis of the role of ICTs in poverty-reduction, and seek to put in place a positive enabling environment.

This publication has outlined the importance of a broader view of ICTs in development co-operation. For the development community to take advantage of the new opportunities offered by ICTs, the community must keep a view that includes the wider picture – not the specifics of this technology or that channel of information but of the developmental processes known to be good practice.

The real challenge lies ahead: **our organisation behaviour** has to be changed. Policy and/or strategies papers can and should be prepared, but in themselves are not sufficient. DAC members have already identified good-practice processes that should be basis of any development co-operation. The mainstreaming of ICTs will be successful only when these good practices are applied in the planning processes. That demands a preparedness to be flexible, to respond to partnerships and participatory planning and a willingness to co-operate and collaborate to optimise the use of resources.

But how should DAC members organise themselves so that they can best integrate ICTs in development co-operation? No single best practice has yet been identified. Various models have included the creation of a special team, section or division; others have suggested the recruitment of expert staff from within or outside the organisation. Yet none of these models has proven to offer an undisputed best-practice approach. There has, then, to be a continuous effort to understand the rapidly changing role of ICTs and the best way to organise the response.

This effort should come from all DAC members, from policy-makers to practitioners in the field. It follows that capacity-building is a vital part of this effort, with training energising and informing people in headquarters, country offices and in the field.

There must also be a continual sharing of information and experience – both successes and failures – in order to build a DAC-wide picture that understands the role of ICTs in economic growth and the reduction of poverty.