



1. Introduction

This document presents a review of the progress made in the implementation of Action Line C7 (E-business) since the first World Summit on the Information Society (WSIS) in 2003. It is based on the 10-Years Review Report Template contained in the *WSIS Forum 2012: Outcome Document*.

As Action Line facilitators, the UN Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC) and the Universal Postal Union (UPU) have supported eight facilitation meetings in Geneva, since 2009 as part of the annual WSIS Forum.¹ These meetings have provided a venue for different stakeholders to exchange views and experiences with regard to trends, impact and policies related to e-business (box 1).

Box 1. Action line facilitation meetings related to E-business, 2006-2013

E-business action line meetings have focused on a number of issues since 2005, covering the various aspects highlighted in the Geneva Plan of Action under e-business. The meetings have occasionally been organized jointly with other action lines.

2006: E-Business and and E-employment (with e-employment action line)
2007: ICTs, Global Supply Chains and Development (with e-employment action line)
2008: E-Commerce as a Key Facilitator for SME Competitiveness
2009: E-Business and Poverty Alleviation
2010: ICT and Rural Enterprise (with e-agriculture action line)
2011: The Promise of Mobile Technology (with e-agriculture action line)
2012: Promoting the Domestic ICT Sector
2013: E-Commerce and Development

Source: UNCTAD, ITC and UPU.

In 2012-2013, the facilitators jointly organized an open consultation on the e-business action line. A wide range of stakeholders, such as trade bodies, international organizations, businesses, governments and civil society across the globe took part in the consultation. The findings of this process were presented at the WSIS+10 Review meeting held in Paris at the UNESCO Headquarters in February 2013.

In between the annual WSIS Forums and related meetings, the respective work programmes of the three co-facilitators have continuously supported the implementation of the action line on e-business.

¹ The International Labour Organization (ILO) was among the original co-facilitators of this action line but has not been active after 2008.

- **UNCTAD** carries out policy-oriented analytical work on the development implications of information and communication technologies (ICTs). It promotes international dialogue on issues related to ICT for development, and contributes to building developing countries' capacities to measure the information economy and to design and implement relevant policies and legal frameworks.
- **ITC** is active in the deployment of Web marketing, e-commerce and mobile solutions benefiting small and medium enterprises (SMEs) and trade-support institutions in developing countries through training, advisory services and customizable products. It works with local stakeholders to adapt technologies to local requirements. ITC promotes the usage of ICTs for trade development through its trade-related technical-assistance projects.
- **UPU** promotes the postal network as an important infrastructure for the Information Society, especially related to universal access to E-business and E-commerce. The UPU implements technical assistance projects to encourage countries to use ICT to transform and modernize their postal structures. It facilitates cooperation between Posts and external partners to encourage developing countries to build necessary ICT capability, and provides training programmes to postal sector workers on ICT use. Additionally, it monitors the development of ICT-related products and services by Posts, publishes related benchmarks and E-business best practices as tools to encourage widespread adoption.

The actual implementation of the action line relies on the efforts of all stakeholders. In the WSIS Stocktaking Database, hosted by ITU, a total of 522 projects were logged under e-business between 2007 and 2013. A total of 83 countries reported they had undertaken projects to facilitate e-business. Of these, 56 were developing economies, 8 transition economies and 19 developed countries. International organizations reported some 96 projects contributing to the e-business action line.²

This document builds on the open consultation, on reports from the action line facilitation meetings and on other research and analysis of relevance to the topic. The following section covers the scope and definition of the action line on e-business as well as examples of activities undertaken by countries and international organizations to facilitate e-business for development. The paper concludes with a set of challenges identified by participants in the action line facilitation meetings, as well as a list of suggested priority actions to make the future implementation of e-business more effective.

² Database consulted on 3 January 2014 and available at: <http://groups.itu.int/stocktaking/HOME.aspx>.

2. Review

2.1 Scope and definition of e-business

There were three bullet points (a-c) mentioned in the Geneva Plan of Action mentioned under Action Line C7 (E-business) (box 2):

Box 2. Action line C7-E-business in the Geneva Plan of Action

- a. Governments, international organizations and the private sector, are encouraged to promote the benefits of international trade and the use of e-business, and promote the use of e-business models in developing countries and countries with economies in transition.
- b. Through the adoption of an enabling environment, and based on widely available Internet access, governments should seek to stimulate private sector investment, foster new applications, content development and public/private partnerships.
- c. Government policies should favour assistance to, and growth of SMMEs, in the ICT industry, as well as their entry into e-business, to stimulate economic growth and job creation as an element of a strategy for poverty reduction through wealth creation.

Source: Geneva Plan of Action.

"E-business" refers to the use of information and communication technologies (ICTs) to facilitate business processes. Business processes, in turn, may relate to communicating with governments, suppliers and clients; purchasing or selling goods and services on line (e-commerce); resource management; marketing and others. Transactional arrangements within e-business are referred to as e-commerce.³

The terms of reference for the action line refer not only to the use of e-business but also to the production of ICT goods and services. Thus, in the context of the e-business action line, it is important to consider efforts to support both the use and the supply of e-business solutions. In the following sub-sections, the developments with regard to the three subcomponents identified in the Geneva Plan of Action are reviewed in turn.

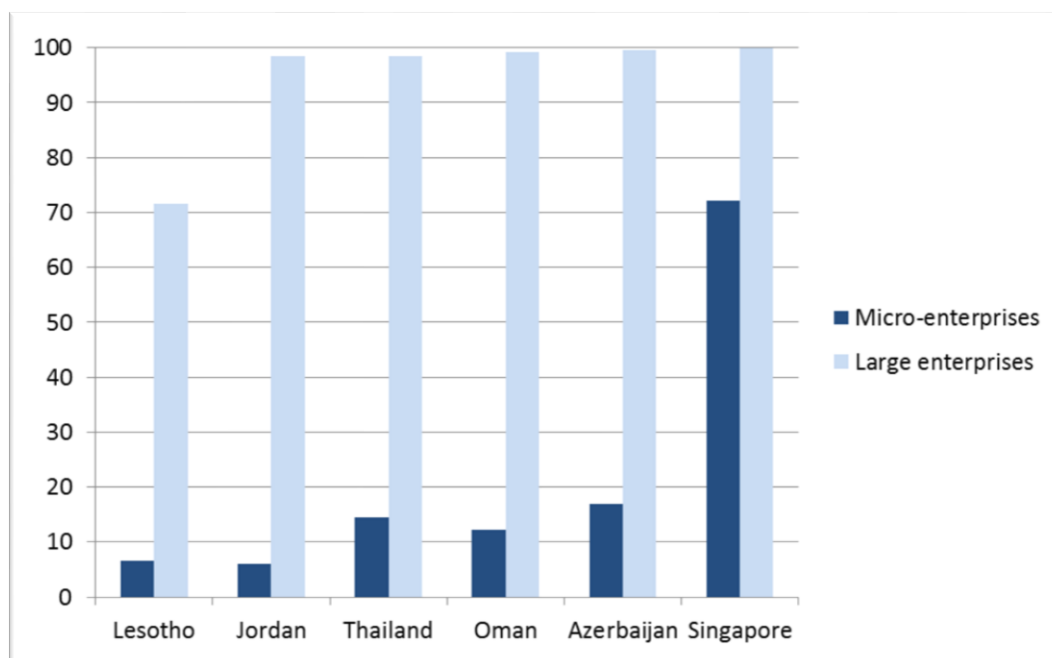
³ According to the OECD, an e-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organizations.

2.2 Promotion of the benefits of international trade and the use of e-business, and promote the use of e-business models in developing countries and countries with economies in transition

When carefully integrated into policies and processes, ICTs can reduce business costs, promote transparent, rules-based systems, and improve communication between the public and private sector.

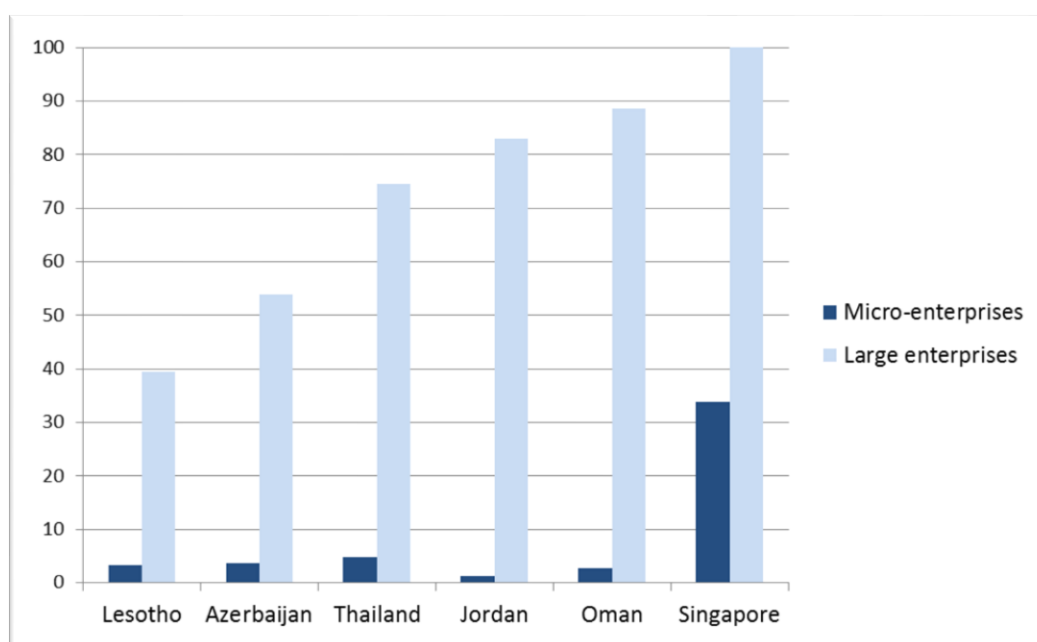
Since 2003, e-business practice has grown rapidly and evolved in different ways. Computerization of business administration is now the norm in large and medium-sized businesses worldwide and in almost all businesses in high-income countries. The use of mobile phones by small businesses in developing countries is now widespread and continues to expand, but the use of computers and the Internet remains more limited, especially in microenterprises. Figure 1 shows that the extent to which enterprises in selected countries are using the Internet varies greatly between large enterprises (>250 employees) and micro enterprises (0-9 employees). Figure 2 presents a similar picture with regard to the share of enterprises with a website. It is worth noting that many enterprises in the countries included use the Internet without having their own website.

Figure 1: Share of micro and large enterprises using the Internet (latest year), selected countries, per cent



Source: UNCTAD, for more data see UNCTADstat at <http://unctadstat.unctad.org>.

Figure 2: Share (%) of micro and large enterprises with a website (latest year), selected countries



Source: UNCTAD, for more data see UNCTADstat at <http://unctadstat.unctad.org>.

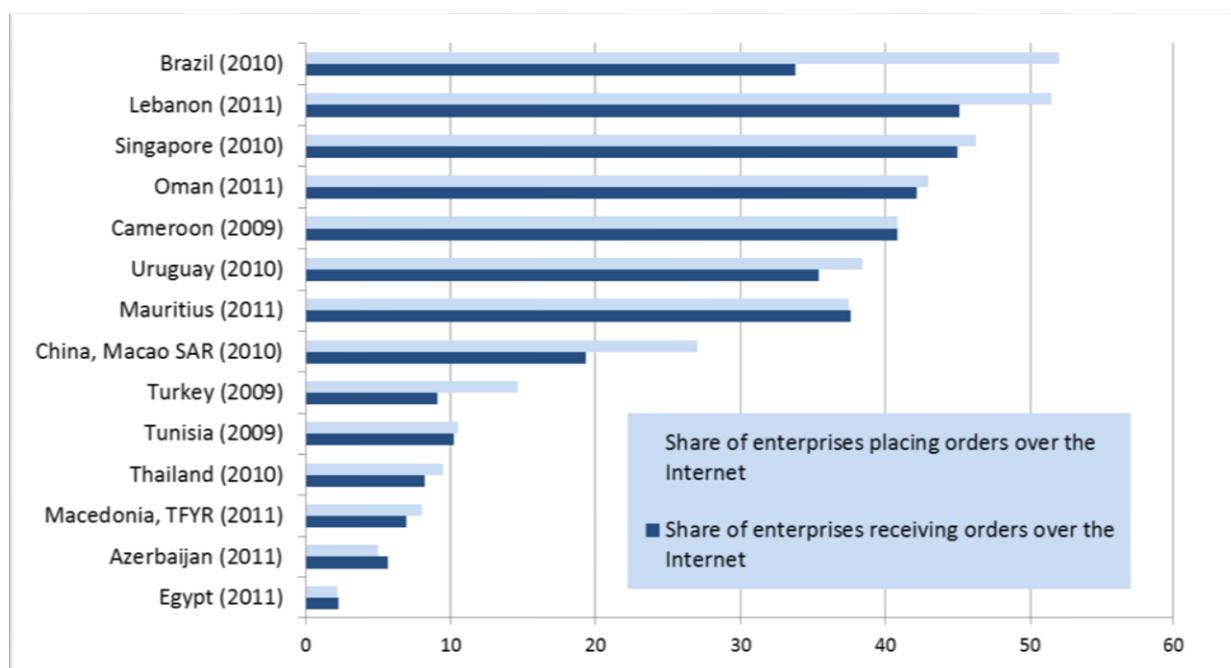
Available information suggests that mobile phones have become the most commonly used ICT tool among micro and small enterprises in low-income countries. The level of use has been found to be consistently high also in informal-sector enterprises. Mobile phones are increasingly leveraged by enterprises for non-voice uses, such as text and picture messaging, Internet access and mobile money. These new applications can help raise productivity and reduce information search and communication costs through better price information and reduce the need for travel (UNCTAD, 2010 and 2011). Mobile applications can also be leveraged by support organizations (as illustrated for example by the ITC's Trade at Hand mobile business solutions).⁴

While a growing number of enterprises are making use of the Internet to buy and sell products, the potential of e-commerce is still far from fully exploited, even among enterprises in developed countries, but particularly in developing countries. Within the OECD group of countries, the share of enterprises selling on-line ranged in 2012 from less than 10 per cent in Greece, Italy and Turkey to more than 35 per cent in Australia, Iceland and Norway (OECD, 2013). On average, e-commerce sales in the OECD accounted for 14.5 per cent of total turnover, with higher ratios for large enterprises (ibid.).

⁴ See <http://www.intracen.org/itc/exporters/trade-at-hand/>.

Among the developing and transition economies that report data, there is also wide variation (figure 3). Whereas more than half of the Internet-using enterprises in Brazil and Lebanon purchase online, the corresponding share is below 10 per cent in Azerbaijan, Egypt, Macedonia TFYR and Thailand.

Figure 3: Share of enterprises (>9 employees) using the Internet that place or receive orders over the Internet, selected developing and transition economies, per cent



Source: UNCTAD.

Recent research has shown that the ICT dimension is frequently absent from private sector development (PSD) strategies, and neither policymakers nor small business owners in developing countries are harnessing these new possibilities to the fullest (UNCTAD, 2011). The least developed countries (LDCs) in particular face significant challenges in their transition to the information economy. These have to be addressed to realize the potential of e-business and e-commerce for SMEs.

ICT infrastructure is improving in many LDCs, especially with regard to mobile telephony, but also in terms of Internet penetration. New business opportunities have emerged as a result. For example, online work – also commonly referred to as crowd-sourcing or remote, contract or freelance work – has fast become a source of employment for graduates from schools in developing countries (UNCTAD, 2012). Moreover, ICTs offer women entrepreneurs in developing countries new opportunities to start and grow businesses. Through new as well as traditional forms of ICTs, they are able to reach more

customers, become more efficient and build their businesses in ways they could not do before (UNCTAD, 2014).

Public acceptance of e-commerce related to both services and goods has increased, partly thanks to the fact that it has become possible to engage in e-commerce using different platforms, such as computers, mobile phones and other handheld devices. Social networks are also facilitating the development of e-business and e-commerce.

There is an important, often overlooked, link between the digital and physical worlds of the Information Society. For e-commerce, even though the order is placed on the Internet, for a significant proportion of the transactions, the goods are not delivered electronically. A logistical partner – very often the national Post – provides the link between the seller and the buyer (box 3). Posts are committed to ensure that customers do not feel the difference between buying online domestically or from another country. ICTs are an opportunity for Posts to improve their existing services or to evolve a whole new range of services (UPU 2012).

Box 3: E-commerce and the postal sector

The ICT revolution has had a considerable impact, re-shaping and transforming the postal sector. Posts that are managed in the traditional government mould have generally been late adopters of ICTs. However, today almost every Post, irrespective of whether it operates in a protected or open market, or whether it operates as a government corporation or as a private company, either uses or is preparing to use ICTs in order to improve quality of service, accessible and profitability of services (UPU 2010). ICT infrastructure, regulatory reform as well as national innovation strategies are important drivers of postal e-business development (UPU 2012).

Posts are an essential element of the e-commerce value chain, meeting the needs of consumers buying online and supporting micro and small enterprises to develop their own e-commerce offerings. The single postal territory, defined by the UPU Convention, provides the opportunity to overcome the gap between developing and developed countries in the level of use and development of ICTs, to ensure that citizens and businesses enter the Information Society on an equal footing including the right to seek, receive, transfer, produce and disseminate information and goods, as well as the right to ensure the confidentiality of any legally protected information, based upon its historical role in communication, trade and commerce. Additionally, the universal nature of the Postal network provides effective measures to boost the rural and underserved communities and reduce economic disparities between rural and urban areas. With more than 600,000 post offices in the world, the postal presence in rural areas is unmatched by any other network.

The use of ICTs in the postal sector has given a tremendous boost to the growth of the ICT industry and services. What is more, the impact of ICTs used by Posts has not been confined to the postal sector; their cascading effect has had an impact on governance and its societal and economic

linkages. Besides contributing to more inclusive economic growth and more responsive governance, the projects have also encouraged the growth of e-commerce and mobile commerce (UPU 2010).

As a result, postal service development is an integral component of a multi-sectoral plan to bring forward and coordinate the development of the Information Society. The economic opportunities of e-business is encouraging government policy for introducing ICT-based new services in national postal systems, and of reshaping one of the last unreformed public services into a nationwide network facilitating payments, communications, logistics and trade.

The UPU is building on that strength to help Posts provide rural citizens in developing countries with e-commerce enabling services including financial services such as postal savings accounts, government payments, loans and insurance, as well as a secure, reliable, efficient and affordable service for international and national electronic money orders. Offering such services to the unbanked can lead to poverty reduction and increased economic participation (UPU 2013).

The benefits of “wiring” the Posts, both digitally and financially, have gone far beyond the extension of financial services and the modernization of the postal operator. The additional benefits in terms of e-government and e-commerce are significant and the government and social services deployed through the postal network (distribution of medicines, schoolbooks, voting materials, simplified export processes) can now be controlled and delivered with real-time information concerning transportation and delivery and customized to meet local needs and characteristics. The combination of ICTs and Post has also enabled the sharing and leveraging of multiple networks to achieve economies of scale while providing support for overall economic and social inclusion (UPU 2010).

For example, Korea Post has played an important role in the growth of e-commerce in the Republic of Korea. The operator has established a “platform where as many e-commerce businesses as possible could appear directly or be linked to the e-commerce system of the post office” and has served as “a shopping portal through linkages with several shopping malls and major retailers”. It has also established “an independent system for payment and certification service”. The government has used Korea Post’s e-commerce venture as a test bed for developing sound e-commerce practices, such as quality guarantee, certification and refund systems.

Furthermore, the integration of a wide range of services within the ICT/Postal Hub, including financial services, transportation and delivery, export facilities and e-commerce helps to counterbalance the marginalization of some portions of the population that typically occurs during the development cycle as wealth and access become more concentrated.

Source: Universal Postal Union.

2.3 Adoption of an enabling environment, stimulation of private sector investment and fostering of new applications, content development and public/private partnerships.

During the past decade, a growing number of governments have developed and implemented national ICT strategies to boost their economic development.⁵ Fostering the uptake and use of ICTs in the business sector should constitute a core element of such strategies. There is no “one size fits all” solution for promoting ICT diffusion among enterprises. Strategies need to be tailored to each country, reflecting different company needs; industry structures; demographic, geographical and cultural situations; and policy priorities. They also need to be reviewed regularly to reflect market and technology changes and to ensure that they are consistent with the development goals set out.

Since 2005, telecom regulations have evolved in most countries, with increased competition, larger investments, lower prices and a dramatically improved access to and quality of up-to-date telecommunication services as a result. Online payment systems, e-banking, e-procurement portals and government support dedicated to e-business have also been developed, although considerable work remains to be done in many countries.

Governments can create environments for greater ICT uptake, by liberalizing markets to expand and improve network infrastructure, providing a supportive legal and regulatory environment for electronic transactions, and taking steps to enhance technological diffusion. They can seek to overcome market failures by creating demand aggregation (e.g. by developing e-government services, such as e-procurement, and encouraging firms to use them) and by supporting the development of ICT skills. An additional area relates to the development of better data. Many countries lack up-to-date information on the nature of ICT use among enterprises, hampering their ability to formulate and monitor policies and strategies in this area.

A prerequisite for more widespread uptake of e-commerce is that enterprises and consumers trust the systems. Some Governments still need to adopt and enforce adequate legal frameworks to unleash the full potential of electronic transactions. Technological progress has raised new legal challenges and added urgency to the adoption and enforcement of relevant laws and regulations, in particular in relation with information security. For instance, the use of mobile devices for commercial transactions creates specific issues with respect to security of the transmission, secure identification of the

⁵ As of April 2010, 163 countries and territories had a national e-strategy in place, and another 13 countries and territories were formulating and adopting one (ITU, 2010). As of mid-2013, the Broadband Commission stated that there were 134 national broadband plans in place of varying type and quality (Broadband Commission for Digital Development, 2013).

parties, formation of contracts, options for payment of the price of goods or services purchased, privacy and data retention, and consumer protection (UNCTAD 2012b).⁶ The expanded use of cloud computing also raises concerns about the legal and regulatory implications of such developments (UNCTAD, 2013a). As of June 2013, 101 countries (including 55 developing countries) had adopted data privacy laws (Greenleaf, 2013).

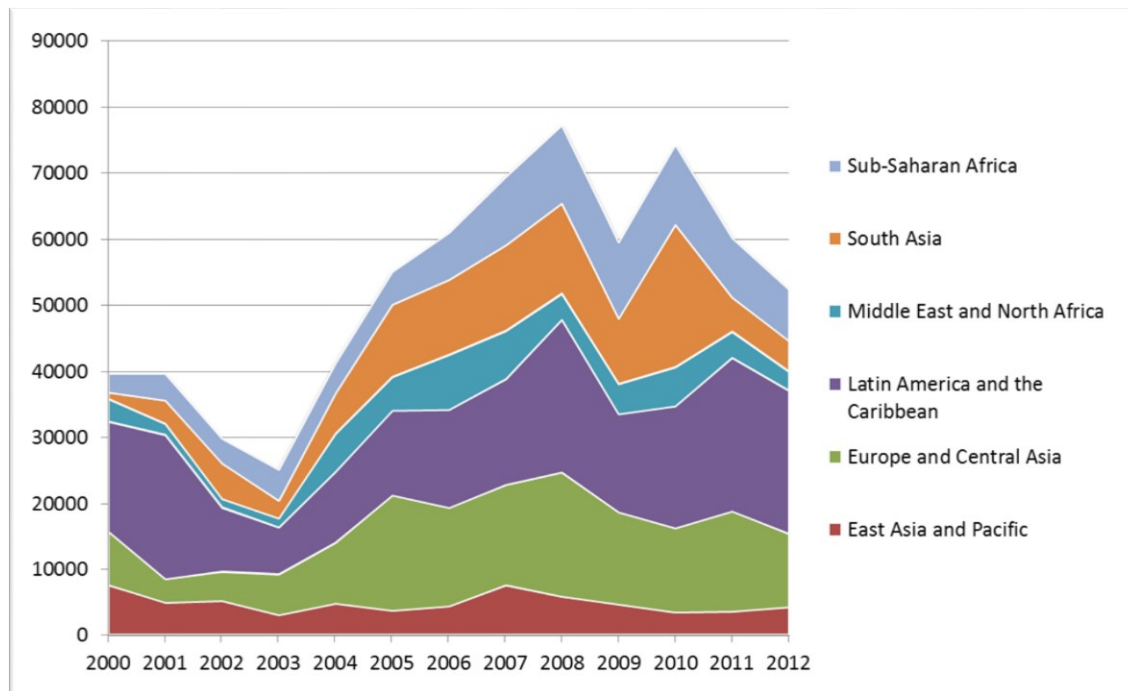
The international community provides guidance to developing countries wishing to implement legal reforms related to e-commerce and m-commerce and promotes regional and global harmonization in order to facilitate online international trade. UNCITRAL texts on e-commerce, including the United Nations Convention on the Use of Electronic Communications in International Contracts (2005), may serve as a model in this context.

Developing countries are increasingly aware of the need to harmonize their cyberlegislation with neighbouring countries and other significant commercial partners. Regional cyberlaw initiatives are underway to support regional integration or foster countries' participation in international trade. In Asia, for instance, 9 of the 10 members of the Association of Southeast Asian Nations (ASEAN) have adopted harmonized e-transactions laws based on UNCITRAL texts, and Cambodia is intending to adopt similar legislation (UNCTAD, 2013b). In Africa, several regional groupings are in the process of developing guidelines in view of the development of e-commerce and m-commerce. The East African Community (EAC) has already made significant advances by preparing a regional Framework for Cyberlaws (UNCTAD, 2012c). In Latin America and the Caribbean, the adoption of harmonized cyberlaws based on UNCITRAL texts is also progressing (see UNCTAD 2009a and 2009b).

A more enabling environment has attracted large-scale investment in telecommunications infrastructure, and especially with regard to mobile networks. Private investment has taken the lead in this context, including in low- and middle-income countries. According to data from the World Bank's Private Participation in Infrastructure (PPI) database, the total amount of annual investment in telecommunication sector projects in low- and middle-income countries increased from \$25 billion in 2003 to \$77 billion in 2008. The financial crisis led to a sharp drop in 2009 followed by a recovery in 2010 to \$74 billion. In 2011 and 2012, investment volumes declined again (figure 4). Developing countries are increasingly perceived as attractive destinations for capital outlays in telecommunications (ITU, 2012).

⁶ As of January 2014, there were more than 200 known live and more than 100 planned mobile money deployments, the great majority of which in developing countries. See <http://www.gsma.com/mobilefordevelopment/programmes/mobile-money-for-the-unbanked/tracker>.

Figure 4. Investment in telecommunication infrastructure projects with private participation, 2000-2012, low- and middle-income countries by region, US\$ millions



Source: World Bank PPI Database.

Several aspects of the evolving ICT landscape have created better opportunities for entrepreneurs and enterprises in developing countries to engage in the development of content and software applications (UNCTAD, 2012).

- First, the Internet has become the crucial platform for software development, delivery and use. It has dramatically added to the innovative potential of software for productive and social activities. Web 2.0 is often used to describe a new generation of web-based services and social media that allow people to interact, collaborate and share information. This has become possible thanks to greater bandwidth and computing power. An important feature of Web 2.0 is the increased amount of user-generated content.
- Second, the expanded use of mobile phones is accentuating the demand for new applications, content and services that are adapted to local contexts. This trend has already given rise to a highly dynamic industry for the development of mobile applications for smartphones and other mobile devices, with growing involvement of developers in developing countries.
- Third, many developing countries that were previously suffering from poor international broadband connectivity have in the past few years become linked to one or several international fibre-optic cables. Whereas broadband divides remain wide, with LDCs in particular lagging behind, such improved connectivity

is enabling programmers in more countries to engage in software projects and enhances the demand for web-based applications.

- Fourth, related to the improved broadband Internet access, cloud-based services are expanding fast. By providing computing resources on demand via a computer network, cloud computing allows clients to use applications without actually having them installed locally.
- Fifth, new production modes for software – such as distributed peer-production over the Internet – are leading to new business models based on local software service provision and adaptation. Opportunities for the internationalization of software value chains are expanding thanks to the introduction of new tools, platforms and technology for collaboration.
- Finally, there is growing recognition of the value of free and open source software (FOSS). For software enterprises from developing and transition economies, greater emphasis on FOSS can help to promote domestic market development and local innovation.

While these new trends imply better opportunities for developing countries, their ability to meet domestic needs for software and to supply software services or products to international markets depends on the strength of their domestic capabilities. In order to benefit fully from inflows of software knowledge and technology, a certain level of absorptive capacity is required. At the same time, countries that achieve a minimum level of innovative and learning capacity stand a greater chance of linking up to international knowledge and innovation systems.

2.4. Government policies favouring assistance to, and growth of SMMEs, in the ICT industry, as well as their entry into e-business, to stimulate economic growth and job creation as an element of a strategy for poverty reduction through wealth creation.

A growing ICT sector can offer jobs and income-generating opportunities and, in some cases, create entirely new livelihoods for the poor. Moreover, a vibrant ICT sector is important to facilitate and sustain more widespread use of ICT throughout the economy. At the same time, gains are not automatic. The opportunities for the poor to benefit directly or indirectly vary between activities and there are also potential risks to be considered. The net outcome is influenced by government policies. Overall, low and middle-income countries are no longer just users of ICT-enabled services and solutions, they are also starting to act as providers.

The evidence at hand suggests that the ICT sector's contribution to poverty alleviation depends on the nature of activities involved (UNCTAD, 2010). The direct

involvement of poor people in the production of ICT goods and services can have a positive effect on their livelihoods. On the other hand, direct participation is likely to be relatively narrow in terms of the number of people concerned.

Within the ICT sector itself, there are various ways for poor people to get involved. ICT manufacturing is characterized by a high concentration of global production and exports, significant economies of scale and high barriers to market entry for new countries and companies. However, available information, for China in particular, indicates that the expansion of ICT manufacturing has helped generate millions of jobs for migrant workers and significant transfers of funds from urban to rural areas.

In the case of outsourcing and offshoring of IT services and ICT-enabled services, relatively few countries have so far succeeded in developing sizable activities. Moreover, certain skill requirements need to be met for workers to enter. Where this is the case, including in some LDCs, it offers significant export opportunities (box 4). Most direct and indirect job creation has occurred in major urban agglomerations, although companies are beginning to spread activities also to second- and third-tier cities. There are encouraging developments related to social outsourcing, which may create new livelihoods also in rural areas. The most important potential contributions to the poor are likely linked to second-order effects, such as indirect job creation. If adequate ICT infrastructure is in place, "micro-work" and crowdsourcing can also offer employment opportunities to people with basic levels of skills (such as literacy and familiarity with ICTs), and can be an avenue for the development of profitable market opportunities for businesses in developing countries.

Box 4: Improving the export competitiveness of the IT and ICT-enabled services sector in Bangladesh

The information technology (IT) and ICT-enabled services sector in Bangladesh offers a strong value proposition, with a large pool of trained engineers and operators. However, despite the fast growth of the sector, it remains a marginal contributor to Bangladeshi exports. Binding constraints include a) the lack of concrete, coordinated actions to exploit the sector's foreign-trade potential, b) the inability of the IT association to provide a results-oriented B2B matchmaking service to its members and c) insufficient and inconsistent branding efforts, with low visibility on the global IT outsourcing marketplace as a result.

The Netherlands Trust Fund II (NTFII) project, funded by the Government of the Netherlands, has supported the efforts of the IT and ICT-enabled services sector in Bangladesh to improve its export competitiveness and to strengthen its business links with Europe. The project was implemented by ITC in partnership with the Dhaka Chamber of Commerce and Industry (DCCI)

and the Bangladesh Association of Software & Information Services (BASIS). It was conducted between October 2010 and 30 June 2013 and benefited 40 Bangladeshi companies.

Key outcomes of the project include:

- *Sustainable business relationships*: more than 700 pre-scheduled business to business meetings helped 24 of the 40 companies to increase their exports by 20 per cent on average.
- *Business linkage services to SMEs*: both partner organizations, BASIS and DCCI, deployed a B2B matchmaking service and dedicated staff to manage the service. For example, BASIS provided the service commercially to 16 of its members during a visit by a delegation of European IT companies seeking business partners in February 2013.
- *Enhanced branding capacity*: a strategic framework for the IT industry to attract more attention from media and consultancies specialized in IT outsourcing in target markets.

The project demonstrated the potential to offer support to LDC's in the development of their IT and ICT-enabled sectors. Discussions are underway with development partners and countries to undertake similar activities for other emerging ICT & ITES sourcing destinations.

Source: International Trade Centre.

The part of the ICT sector with arguably the greatest direct involvement of poor people, and which is spreading rapidly in many low-income countries, is related to ICT micro-enterprises. There are relatively low entry barriers into some related activities, making it possible for people also with limited formal skills to participate. At the same time, ICT micro-enterprises are exposed to volatility and risk, and returns on investment are often low, forcing entrepreneurs to draw on other sources of income as well. ICT micro-enterprises in the informal sector often complement enterprises in the formal sector by selling goods and services that are better adapted to low-income consumers.

Another distinct area of PSD that can be better addressed by the use of ICTs is women's entrepreneurship (UNCTAD, 2011 and 2014). While ICTs can do little to redress underlying societal structures and economic systems that hamper opportunities for women entrepreneurs, they may be used to overcome some of the challenges that women face, including access to finance, limited skills and training, lack of time due to family commitments, and limited physical mobility. Initiatives and training programmes may need to be developed bearing in mind these constraints, and with the active participation of the women entrepreneurs that they are to assist.

3. Developments and challenges

3.1. Recent developments and emerging trends

As in other areas of the Information Society, the area of e-business has been affected by changes in the ICT landscape. For example, mobile telephony has made connectivity in some rural areas of low-income countries – long regarded as unviable – into a reality. Expansion in the reach of communications networks has been accompanied by innovation in services and applications, influencing adoption patterns and user behaviour. These changes have been difficult to predict. They have opened up new opportunities for development interventions but have also undermined the sustainability of other projects.

The open consultation organized on e-business provided an opportunity to identify technology-related trends that will play an increasingly important role in the medium term. The digital divide remains a significant concern. Over time, its nature has changed. The gap in access to basic telephone services, once very substantial, is now significantly diminished and expected to shrink further in the next few years. In its place has come a gap in access to the Internet and, particularly, to broadband. The digital divide in broadband capacity and quality leads in turn to a divide between countries and regions in the extent to which individuals, businesses, economies and societies are able to take advantage of new ICT innovations and applications. Technological innovation in the area of cloud computing has made the broadband divide more visible and also raised concerns related to the risks associated with cloud based applications and data hosting. Innovation in 3D printing is another trend that will impact the production and consumption of goods.

In terms of new market trends, low and middle-income countries represent an increasingly important destination for investment in the ICT sector, and Africa is seen as a more important destination for IT/BPO outsourcing than before, benefiting in particular from a shared time zone with Europe. The consultation also pointed at upcoming “South to North” transfers of ICT-related innovations, illustrated by the mobile money revolution.

In terms of the overall business environment, the context of the global financial crisis has made the topic of tariffs and taxes related to e-commerce more central. E-commerce stakeholders will also increasingly have to address issues related to electronic authentication and payments, privacy, open access, information security and the fight against online fraud, intellectual property rights and consumer protection.

3.2 Current and future challenges

The open consultation identified several challenges that would need to be addressed in order to facilitate an inclusive information economy. Limited rural access to affordable telecommunications still remains an issue in many developing countries. Moreover, in spite of increased connectivity, affordable broadband is far from ubiquitous. As a result, many SMEs and micro-enterprises in developing countries are still not effectively using ICT tools. Moreover, not enough viable ICT services are targeting the base of the pyramid. Finally, too few developing countries have emerged as competitive ICT goods and services providers.

Regarding the business environment, several areas need to be addressed urgently to make the future implementation of e-commerce more effective. Key areas include ensuring secure online and mobile payments and Internet security in general. There is also a need to strengthen and streamline consumer protection rules, and to ensure consistent e-commerce regulations, both within and across borders. Regulatory requirements often remain linked to “bricks and mortar”-era approaches to business. Inconsistent e-commerce regulations, especially across borders, slow down the development of e-commerce and destroy consumer confidence.⁷

On the topic of digital content, a lack of, or insufficient availability of legal content offers that are user-friendly and that are available at the same time as when illegal content is readily obtainable and practically free.

Cost-effective transportation and logistics to move goods across borders remains a major hurdle for international e-commerce, especially for consumer purchases. Efficient and cost effective distribution is not possible without appropriate road and transport infrastructure, efficient customs processes and related taxation regulations, and relevant postal sector reform. As a result, consumer adoption of cross border e-commerce will continue to be challenged until these issues are addressed in a coordinated manner.

Another challenge already mentioned concerns the lack of data on the ICT sector and on ICT use by enterprises. Such information is important to support the design, implementation and monitoring of relevant policies. The IT industry itself may contribute data to support the planning needs of policy makers for the promotion of the local ICT sector.

⁷ One contribution flagged the case of EU web-shops, which have to comply with regulations related to VAT, refunds and returns policies of all European countries where their products/services are distributed online.

4. Recommendations

Many of the strategies and policy initiatives for ICT4D which have been developed by governments and their development partners in the past 15 years have emphasized the delivery of services to communities rather than responding to communities' own needs. This has sometimes led to a centralized, top-down model of development which has been insufficiently responsive to the needs of small-scale enterprises and to the priorities of target beneficiaries. In order to make future policy development for ICTs and enterprise more demand-driven, certain considerations are essential.

Policymaking needs to be built upon an understanding of the real experience and requirements of enterprises of different size and in different sectors. Interventions should focus on the needs of enterprises and understanding the limits of local capacity and capabilities. Reaching beyond the requirements of larger enterprises – which may be more ICT-intensive – to micro-enterprises of the poor is not straightforward. Addressing this challenge requires careful needs assessment of beneficiaries and an adequate understanding of the evolving ICT landscape.

Interventions aimed at enhancing ICTs and enterprise also need to be adapted in view of local, sectoral and cultural requirements. Successful experience in one set of circumstances does not guarantee success elsewhere. Rooting policy approaches in the real experiences of relevant enterprises will foster the flexibility in programme design and implementation that is needed to respond both to various local circumstances and to continuous change in technology and markets. It places greater demands on national governments and development partners to work in partnership with stakeholders that can contribute valuable knowledge and experience.

One of the challenges faced in facilitating the action line on e-business has been a lack of well-defined targets. In fact, although vital to the development of the information society, the use of ICT in the enterprise sector is not covered among the WSIS targets as set out in the Geneva Plan of Action. It would be important to include appropriate targets in action plans related to WSIS implementation beyond 2015.

Based on the responses received during the open consultation, the following actions were identified as most important to make the future implementation of e-business more effective:

1. Ensure the sustainability of e-business solutions by engaging users, local and global ecosystem players in innovation processes from the early stages of design and testing.

2. Governments should take steps to develop an enabling environment for e-business, and adopt regulations consistent with the cross-border nature of e-commerce. This includes creating incentives to promote web-based entrepreneurship and strengthening and streamlining consumer protection rules.
3. In view of the logistical barriers to the development of cross-border online trade, the cost of shipping and delivery needs to come down, especially for business to consumer e-commerce. In the area of digital content, cross-border licenses should be set up to facilitate legal content as soon as it has been distributed elsewhere.
4. In LDCs, capacities in IT and internet-related subjects should be strengthened, enabling more people to shape the future Information Society, including its business-related components.
5. In the context of the WSIS Forum, new ways should be explored to allow grass-roots practitioners and thought leaders to better influence macro-level discussions (including related to the e-business Action Line), for example through participatory technologies such as social media.
6. In order to enable stakeholders to better understand e-commerce trends globally, the scarcity of official statistical data on e-commerce needs to be addressed. Key indicators are frequently available only for a limited number of developing countries and refer only to online purchases and sales carried out by households or enterprises. This renders it difficult to assess progress in holistic terms. Similarly, the impact and benefits of countries having more e-enabled businesses at both a micro and macro level should be analyzed.

5. Conclusions

The E-business action line remains highly relevant for the implementation of WSIS-related work beyond 2015. In a globalizing world economy, affordable access to ICTs and adequate skills to make use of ICT applications are of growing importance for enterprises to connect with value chains and to compete. In order to reap the full benefits from the evolving ICT landscape, it is important for governments and other stakeholders to facilitate and encourage both an effective use of the technologies by enterprises in all sectors and a thriving ICT producing sector. Special efforts are needed to involve women entrepreneurs and micro, small and medium-sized enterprises in this context. A vibrant ICT sector underpins productive use of ICTs and stimulates sustainable growth, job creation, trade and innovation as part of broader strategies for poverty reduction through wealth creation.

The extent to which enterprises are able to benefit from E-business still varies considerably. There is still a significant divide in developing countries between large and small companies, between enterprises in different industries and between rural and urban enterprises. The ability to benefit from new innovations, such as cloud computing, varies

according to a number of factors. Further improvements in the ICT infrastructure remains a key challenge for reducing the digital divide (between as well as within countries). Other critical factors include education and skills development, enhanced awareness of opportunities created by E-business, up to date and consistent regulatory and legal frameworks, and other related enabling policies.

At the same time, the scope for making E-business more inclusive has been greatly enhanced in the past few years, notably as a consequence of the mobile revolution. New, more user-friendly and affordable applications are rapidly spreading in countries at all levels of development. The international community has a shared responsibility in making sure that as many enterprises as possible have a fair chance of reaping the benefits from these trends. In order to seize these opportunities, effective partnerships between governments, development partners, the private sector and civil society are crucial.

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