CONNECT ALL
BUSINESSES
WITH ICTs

Proposed Target 11: Connect all businesses with ICTs

Executive summary

Since 2003, the application of ICT to business has evolved in unexpected ways, and e-business has grown exponentially. The use of ICT in the business sector has become vital to developing the information society. Despite this fact, the WSIS Geneva *Plan of Action* does not have any targets related to ICT and businesses. On the other hand, the use of ICTs by businesses is addressed in WSIS Action Line C7 (ICT applications: benefits in all aspects of life), which discusses the importance of businesses as providers and users of ICT and "calls upon governments to promote the use of e-business, especially in developing countries" (ITU, 2005).

In addition to Action Line C7, the private sector and public/private partnerships are explicitly mentioned in six other action lines. This report therefore proposes that a new target be added: "Connect all businesses with ICTs" (proposed Target 11). Data on ICT use by businesses can support policy measures to promote ICT for development, build confidence in the use of ICT and encourage the creation of local content.

The proposed Target 11 can be tracked by three indicators to measure use of ICTs by business, namely through their use of computers, Internet (by type of access) and mobile telephony. Use of computers and Internet are already collected by UNCTAD as part of the compilation of the *Partnership*'s core ICT indicators. The use of mobile phones as an indicator has been proposed in response to the growing importance of mobile phones in developing countries, in particular their use by microbusinesses and small and medium-sized businesses.

While there has been undoubted progress in worldwide business connectivity, the progress in its measurement has been mixed. Unfortunately, there is little internationally comparable data, especially for indicators 11.1 and 11.3.

The use of computers by businesses, particularly in developing countries, can indicate the level of informatization of the business sector. The computer is still one of the main devices to access and use the Internet, particularly in a business setting, where more advanced applications and services are typically needed. However, data on this basic connectivity measure are not available for most developing countries.

In terms of use of the Internet by type of access, there is a growing divide in broadband access between businesses in developed and developing countries. Business size, economic activity and location determine the extent to which businesses use broadband Internet. This affects the way that businesses can benefit from applications and systems. Broadband can enhance communication in supply chains and between businesses, customers and government. It is also a critical enabler of cloud computing solutions, which can reduce operating costs for businesses. However, several developing countries are still unable to produce data by type of access, or data collection is so recent that there are no time series. The official threshold for defining broadband speeds (256 kbit/s or more) has also been largely overcome by the realities of the technology.

While there are almost no internationally comparable data on the use of mobile phones by businesses in developing countries, studies show that mobile phones have become the most commonly used ICT tool among micro and small businesses, and in the informal sector. Mobile phones are increasingly leveraged by businesses in low-income countries for non-voice uses, such as text and picture messaging, Internet access and mobile money.

This report shows that despite growth in worldwide business connectivity, data on business connectivity from developing countries are still insufficient to guide policy-making to bridge the digital divide. Given the limited achievements made on measuring proposed Target 11, the following recommendations are made should there be a post-WSIS target dealing with e-business:

1. To include appropriate targets related to e-business in any action plans beyond 2015, and to define relevant indicators for monitoring. In addition to basic connectivity, the ways that businesses use ICT could be considered. Other relevant indicators for monitoring progress towards e-business related targets could refer to e-commerce, the ICT sector, or gender aspects of the information economy.

2. The Partnership on Measuring ICT for Development should support monitoring efforts in the framework of continued methodological work to define and collect data on the core indicators on ICT use by businesses.

3. Policy-makers and the statistical community should work together to ensure the integration of data collection on ICT use by businesses into national statistical plans, while considering international comparability. Firm-level data provide more meaningful information for designing and evaluating information economy policy.

Introduction

Despite the fact that the use of ICT in the business sector is vital to developing the information society, the WSIS Geneva *Plan of Action* does not have any targets related to ICT and businesses. However, the use of ICTs by businesses is addressed in WSIS Action Line C7 (ICT applications: benefits in all aspects of life), which discusses the importance of businesses as providers and users of ICT and "calls upon governments to promote the use of e-business, especially in developing countries" (ITU, 2005).

The Action Line C7 e-business component was co-facilitated by ITC, UNCTAD and UPU, who organized several facilitation meetings at the WSIS Forum (see Box 11.1).[1] One of the challenges faced in facilitating the action line on e-business was a lack of a relevant target.

Box 11.1: The C7 action line business components

The C7 action line refers to E-business as follows:

"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."

Several action line events related to e-business have taken place in the framework of the WSIS Forum:

2006: E-Business 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: ITC, UNCTAD and UPU, 2014.

In addition to Action Line C7, the private sector (that is, businesses) and public/private partnerships are explicitly mentioned in action lines C1, C2, C5, C6, C8 and C11. This report therefore proposes that a new target be added: "Connect all businesses with ICTs." A target on connecting businesses to ICT could be mapped as per Figure 11.1, with direct linkages to action lines C1, C5, C7 and C8. For the purposes of this report, such a target is being called proposed Target 11.

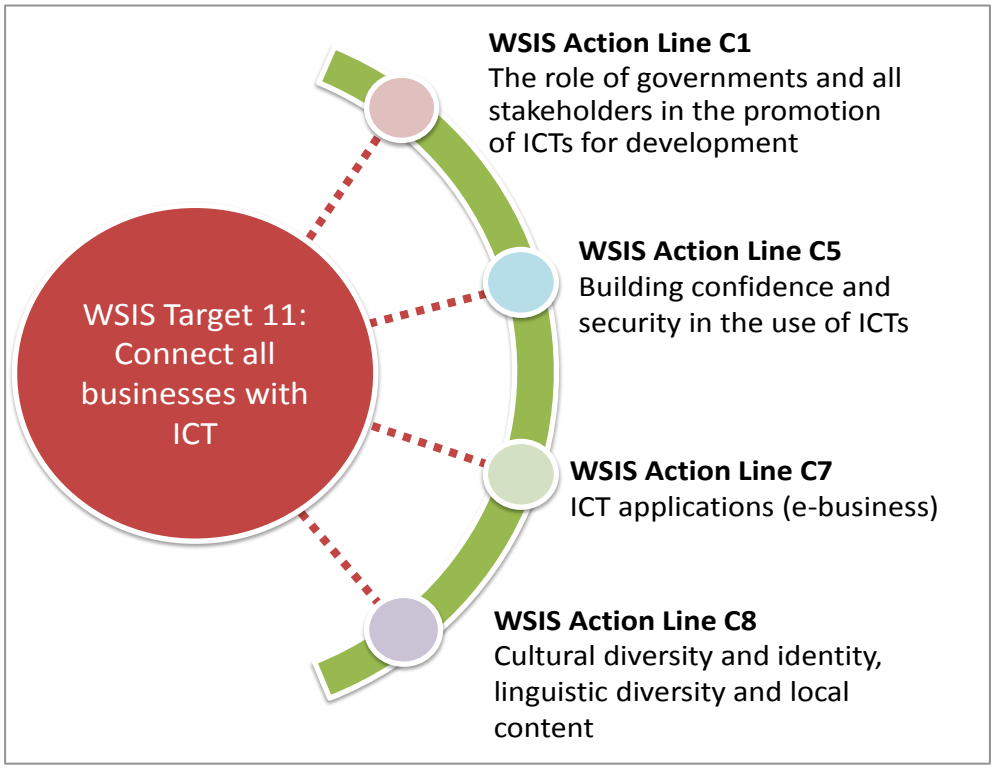
Action Line C1 states that "The private sector should be engaged in concrete projects to develop the Information Society at local, regional and national levels." The use of ICT by businesses can indicate the level of informatization of an economy that will enable its businesses to engage in such projects.

Action Line C5 (Building confidence and security in the use of ICTs) calls for Governments, in cooperation with the private sector, to "… prevent, detect and respond to cyber-crime and misuse of

ICTs …". It also calls for encouraging "… further development of secure and reliable applications to facilitate online transactions." Online transactions (e-commerce) are part of e-business.

Action Line C8 (Cultural diversity and identity, linguistic diversity and local content) states that "… public/private partnerships, foster the creation of varied local and national content … and give recognition and support to ICT-based work in all artistic fields." It also states that "Governments, through public/private partnerships, should promote technologies and R&D programmes …".

Figure 11.1: Relevance of proposed Target 11 to WSIS action lines



ICTs have enormous potential to "… reduce business costs, promote transparent, rules-based systems, and improve communication between the public and private sector." (ITC, UNCTAD and UPU, 2014). A target and related goals on e-business would recognize the growing importance of the information economy and help guide countries in monitoring their adequate integration to that economy, including through policies targeting poverty reduction and private sector development. The least developed countries (LDCs), in particular, face significant challenges in their transition to the information economy. Furthermore, businesses interact with the entities covered by the original ten targets to form the information society.

Since the first WSIS in 2003, the application of ICT to business has evolved in unexpected ways, and e-business has grown exponentially. Automated business processes are the norm in large and medium-sized businesses worldwide and in almost all businesses in high-income countries. But the most significant change is the current widespread and growing use of mobile phones by small businesses in developing countries.

Recent research has shown that the ICT dimension is frequently absent from private sector development strategies, and neither policy-makers nor small business owners in developing countries are harnessing these new possibilities to the fullest (UNCTAD, 2011). The software industry and mobile telephony are combining to offer new business opportunities and source of employment

in developing countries (UNCTAD, 2012a). Cloud computing is the newest manifestation of how ICTs can change the game plan for businesses in countries at all levels of development. Moreover, ICTs offer women new opportunities to start and grow businesses (UNCTAD, 2014).

The *World Telecommunication/ICT Development Report 2010: Monitoring the WSIS Targets, A mid-term review* (WTDR) (ITU, 2010) proposed that a new target to "Connect all businesses with ICTs" be added, while the Framework (*Partnership*, 2011) proposed three indicators, the purpose of which is track access to ICT by businesses (level of connectivity); the indicators are: [2]

Indicator 11.1: Proportion of businesses using computers

Indicator 11.2: Proportion of businesses using the Internet, by type of access (narrowband and broadband)

Indicator 11.3: Proportion of businesses using mobile cellular telephones.

These are 'e-business' indicators in so far as they show the use of ICT by businesses for business purposes. The first two of indicators are already collected by UNCTAD as part of the *Partnership*'s core ICT indicators (see Box 11.2), and the third one had been proposed by UNCTAD (UNCTAD, 2009) in response to the growing importance of mobile phones in developing countries, in particular their use by micro, small and medium-sized businesses. The unit of measurement is the business (enterprise), and the data are usually available through business surveys containing questions on use of ICT.

Box 11.2: ICT and business statistics in UNCTAD

Since 2004, UNCTAD has collected data from developing countries on the use of ICT by businesses and on the ICT (producing) sector, based on the core list of ICT indicators. Within the framework of the *Partnership*, UNCTAD has contributed to the development of the core list of ICT indicators and is currently responsible for the global collection of data on the information economy:

- ICT use by businesses
- the ICT sector and
- international trade in ICT goods.

The results from UNCTAD's annual data collection are used in their research and analysis, such as the *Information Economy Report* series (http://unctad.org/ier), and are published through its statistics portal (http://unctadstat.unctad.org/). The UNCTAD *Manual for the Production of Statistics on the Information Economy* (UNCTAD, 2009) provides guidance to countries on how to produce the core ICT business indicators. UNCTAD provides technical assistance to developing countries also in the form of training courses and advisory services. Since 2013, it has started work to develop indicators on trade in ICT services, and gender-related ICT indicators. More information on UNCTAD's work on ICT for development is available at http://unctad.org/ict4d.

Source: UNCTAD.

In order to ensure comparability and a harmonized understanding within the *Partnership*, the definitions of computers, Internet by type of access, and mobile cellular telephones underlying the indicators correspond to the same definitions of technology used for the core household indicators. While ITU published a recently revised definition of computer that includes tablets (ITU, 2014), this chapter refers to data and indicators that used the previous definition.

The choice of indicators for the proposed new target aims at measuring the basic requirements for a business to use and benefit from ICT. A basic list of indicators also facilitates the production of internationally comparable data by countries at all levels of development.

For indicator 11.1, a computer remains one of the main devices to access and use the Internet, in particular in a business setting, where more advanced applications and services are typically needed. Classificatory variables such as business size (micro, small, medium, large) and economic activity (based on the ISIC classification) can help guide targeted policies to increase connectivity and ICT skills, and to enhance use.

For indicator 11.2, information on whether businesses use the Internet, and what type of access they have, allows monitoring of broadband uptake. The connection quality and speed determine the types of activities that businesses can carry out and the applications or systems they can implement. For example, it can improve the efficiency of the supply chain, enable businesses to better plan resources, and enhance the interaction of businesses with consumers and government. Broadband is a critical enabler of cloud computing solutions, which can reduce operating costs for businesses. UNCTAD has noted that cloud computing accentuates the quality dimension of the digital divide when it comes to broadband services (UNCTAD, 2013). In addition, broadband access has been recognized as a vital element of new sustainable development goals (Broadband Commission for Digital Development, 2013).

Finally, indicator 11.3 responds to the astounding progress in mobile telephone connectivity that has transformed the livelihoods of millions of people in the developing world in the past ten years. The use of mobile phones is increasingly changing the way that small businesses in developing countries are conducting their operations, in particular when fixed telephone lines are not available. Although collecting indicators on mobile phone use by businesses is a new area that is so far untested by most national statistical offices, the potential impact of mobile phones on business performance cannot be ignored and should be monitored. Available information suggests that mobile phones have become the most commonly used ICT tool among micro and small businesses in low-income countries. The level of use has been found to be consistently high also in the informal sector.

Data availability and scope

The nature of ICT is cross-cutting and it is important to ensure that all producers of data on ICT use by businesses work in coordination, including the focal points for the WSIS process as well as national statistical offices and other relevant stakeholders. Data availability on ICT use by businesses is patchy at best, but the methodological framework to guide data production on ICT use by businesses has come a long way since 2003.

The *Partnership* has made available core indicators and associated statistical standards on ICT use by businesses, on the ICT sector and on international trade in ICT goods. It has carried out statistical capacity building, and obtained the endorsement of the highest statistical body of the international community, the UN Statistical Commission. Developing countries have started to collect and publish the data, and most importantly use it to evaluate their ICT policies. However, time series still need to be established and good practices need to be shared, such as the case of Brazil, which has now the benefit of several years of data.

Table 11.1 presents the data sources for the e-business indicators. Data for indicators 11.1 and 11.2 are already collected by UNCTAD annually. Computer use data are scarcer in recent years because many developed countries have stopped tracking that indicator. Data for indicator 11.3 are not yet available from most developing countries. Developed countries such as in Europe have now some

data on mobile connectivity for businesses but that is not comparable to 11.3 (Eurostat collects data related to business enterprises using a mobile connection rather than a mobile phone, and on businesses providing staff with portable devices for business use).

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 microbusinesses. Available data show that levels of ICT use vary widely depending on business size and on economic activity, and in some cases on geographic location. This means that international comparability of totals is problematic, mostly due to the composition of the sample or population surveyed. These indicators are best analysed by disaggregating data further by business size and economic activity, and sometimes geographical location. For indicators 11.1 and 11.2, this information is available in the UNCTAD Statistics Portal.[3]

Table 11.1: Data sources for e-business indicators, 2008–2012

Indicators	Data sources	Data availability
11.1 Proportion of businesses using computers	*Partnership* core indicator B1, reported by national statistical offices and sometimes by ministries of telecommunications. Collected through dedicated ICT business surveys, ICT questions in existing business surveys, or economic censuses.	Data are available for 64 countries for at least one year between 2008 and 2012.
11.2 Proportion of businesses using the Internet, by type of access (narrowband and broadband)	*Partnership* core indicators B3 and B9, reported by national statistical offices and sometimes by ministries of telecommunications. Collected through dedicated ICT business surveys, ICT questions in existing business surveys, or economic censuses. Some data reported by ministries of telecommunications.	Data are available for 67 countries for at least one year. However, some countries collect data only on the use of Internet, and not on the type of access disaggregated by narrowband and broadband.
11.3 Proportion of businesses using mobile cellular telephones	Proposed new indicator. Could be collected through business surveys.	Data are available for 11 countries that responded to the *Partnership*'s 2013 WSIS targets questionnaire, for at least one year.

Source: UNCTAD.

To improve data availability in the future, WSIS stakeholders and the *Partnership* must continue raising awareness of the importance of firm-level data on use of ICT to obtain statistics that are meaningful for policies to develop the information economy. In particular, encouraging national statistical offices to carry out surveys and governments to provide the necessary resources to those entities. Statistics on ICT use by businesses need to be included in national statistical plans and agencies should take international comparability into account, including by making use of the methodological guidance provided by the *Partnership*.

Achievements against proposed Target 11

Use of computers by businesses

Indicator 11.1 refers to the use of computers by businesses. Since 2003, computerization of business administration is now the norm in large and medium-sized businesses worldwide and in almost all

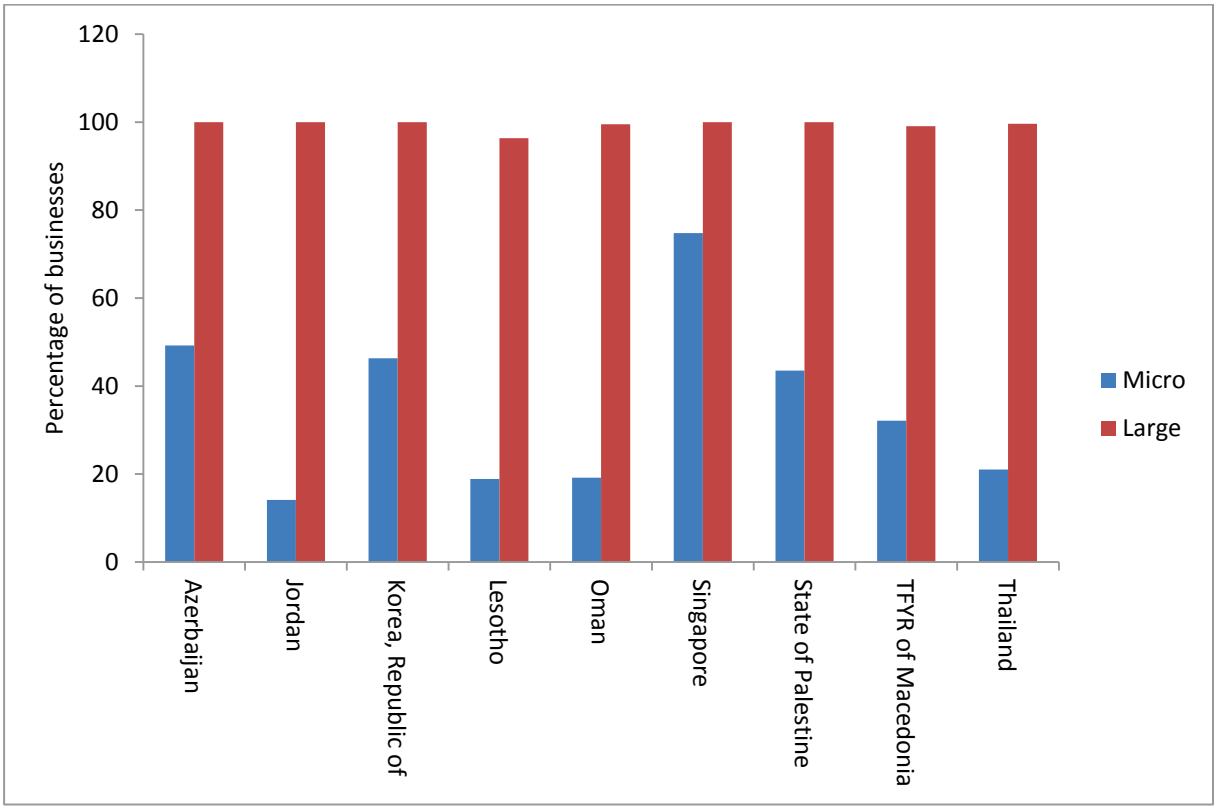
businesses in high-income countries. While in recent years, developed countries such as those in Europe have stopped collecting this indicator, it is still of vital importance in many developing countries. As noted before, totals are not fully comparable between countries and averages can hide wide differences in access to computers by different sized businesses, businesses in primary, secondary or tertiary sectors, or located in more or less urbanized areas. To illustrate this, Table 11.2 shows the total share of businesses using computers for selected countries, where the average is about 49 per cent. However, Chart 11.1 shows the same information for microbusinesses (0–9 employees) and large businesses (more than 250 employees) and shows the wide difference when data are classified by business size.

Table 11.2: Businesses using computers, LYA,[4] percentage

Country	%	Year
Azerbaijan	69	2011
Jordan	18	2008
Korea, Rep.	50	2008
Lesotho	34	2008
Oman	27	2011
Singapore	79	2010
Palestine	47	2011
TFYR of Macedonia	89	2011
Thailand	24	2010

Source: UNCTAD Information Economy Database, 2014, unctadstat.unctad.org.

Chart 11.1: Micro and large businesses using computers, LYA,[4] percentage

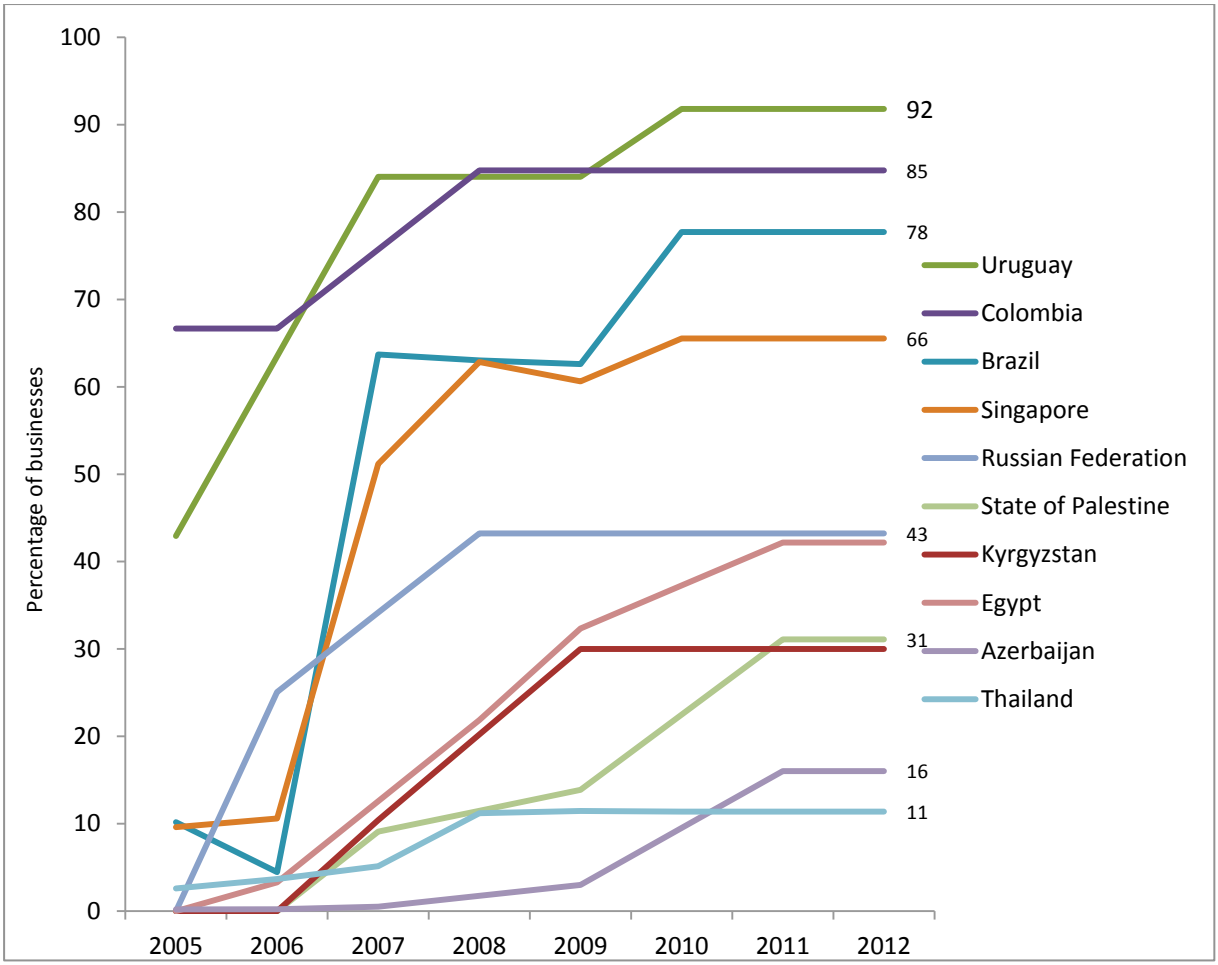


Source: UNCTAD Information Economy Database, 2014, unctadstat.unctad.org.

Use of Internet by businesses, by type of access

Indicator 11.2 refers to the use of Internet by businesses, by type of access (narrowband and broadband). As with indicator 11.1, the extent to which businesses in selected countries are using the Internet varies greatly according to their size, economic activity and location. Some countries are still unable to collect data by type of access, but ask only about the connection of Internet. In several developing countries, data collection is so recent that there is only one reference year and thus no time series. The definition of type of access can pose problems to those countries that no longer consider the speed of 256 kbit/s to be a suitable threshold for broadband. Since broadband connectivity is closely tied to the development of ICT infrastructure, changes tend to be significant once new infrastructure is operational. Chart 11.2 shows the evolution in the proportion of businesses using the Internet by fixed broadband in selected countries where data for several years are available.

Chart 11.2: Growth in fixed broadband access by businesses using the Internet, percentage



Source: UNCTAD Information Economy Database, 2014, unctadstat.unctad.org.

Use of mobile cellular telephones by businesses

Indicator 11.3 refers to the use of mobile cellular telephones by businesses. There were too few country responses to the *Partnership*'s 2013 WSIS targets questionnaire on this indicator (only 11 countries, see Table 11.3) to make any general statements. Furthermore, the figures provided are not comparable with each other, and the level of representativeness with respect to the total

business population can be questioned. All in all, this is an untested indicator that is being collected at the initiative of individual countries.

Table 11.3: Share of businesses using mobile phones, LYA,[4] percentage

Country	%	Year
Brazil	71	2012
Ecuador		2011
Mexico	76	2008
Uruguay	61	2009
Nigeria		
Akwa Ibom State	100	2013
Edo State	82	2013
Kaduna State	80	2013
Nasarawa State	70	2013
Azerbaijan	100	2013
Bhutan	100	2013
Iran, Islamic Rep.	90	2013
Lao PDR	100	2013
Nauru	100	2013
Philippines	19	2010
UAE	100	2011

Source: Partnership on Measuring ICT for Development WSIS Targets Questionnaire, 2013 (*Partnership*, 2013).

However, available information suggests that mobile phones have become the most commonly used ICT tool among micro and small businesses in low-income countries, and in the informal sector. Mobile phones are increasingly leveraged by businesses for non-voice uses, such as text and picture messaging, Internet access and mobile money (see Box 11.3). Innovative mobile applications can help raise productivity and reduce information search and communication costs, providing better price information and reducing the need for travel (UNCTAD, 2010).

Data from developed countries in Europe are not fully comparable for indicator 11.3, as they focus rather on the business use of portable devices, with a subgroup that includes smartphones and personal digital assistant phones (non-computer portable devices).[5] However, those data do provide an insight into the importance of mobile use by businesses. In 2012, 39 per cent of European business enterprises provided non-computer portable devices to their staff. Among large businesses, almost 90 per cent allowed a mobile connection to the Internet, while the share for small and medium-sized businesses was 43 per cent and 71 per cent respectively. European data also show the purposes for portable device use: mobile access to e-mail (88 per cent) and to access and amend documents (56 per cent). Eurostat also collected data on barriers to mobile connectivity by businesses, which included network coverage or speed, subscription costs, security concerns and technical obstacles to integrate mobile devices with the business's existing business applications.

Box 11.3. The case for data on business mobile phone use – mobile money in the EAC

On the back of the rapid uptake of mobile telephony in developing countries, many wireless applications of relevance for small businesses have emerged. Among these, mobile money applications are a remarkable example of the potential of mobiles to address the needs of small businesses in developing countries. As of February 2014, there were well over 200 known mobile money deployments, the vast majority of which in low- and middle-income countries.[6] Africa, in particular the East African Community (EAC), is leading the trend. Yet, no EAC countries were able to provide data on indicator 11.3 through the *Partnership*'s 2013 WSIS targets questionnaire.

Considering that in June 2013, 27.3 million transactions totalling USD 998m were processed across mobile money platforms (for example, bill payments, bulk payments, merchant payments, international remittances, transfers between mobile money accounts and bank accounts), it would be relevant to measure the use of mobile phones by businesses. The largest mobile money service provider, Kenya's Safaricom, indicates that business-to-person (B2P) and person-to-business (P2B) transactions are currently driving growth.[7] Merchants and retailers accept mobile money payments in exchange for different products and services, while other businesses use mobile money as a means to deliver their services, that is, financial institutions, insurance providers, as well as large-scale disbursers and bill issuers.

More in-depth data on the types of services being accessed or delivered by businesses through mobile phones could guide SME development policies and applications. National statistical offices and the telecommunications sector can collaborate to produce the relevant data.

Sources: GSMA, 2014 and UNCTAD, 2012b.

Conclusions and recommendations

If total business connectivity is a target, we could state that data indicate steady progress towards that end, albeit at different speeds for different technologies. Business connectivity worldwide has undoubtedly grown in the past few years, with mobile telephony contributing in great part to reducing the basic connectivity gap. However, although data from developing countries are still far from comprehensive, it is clear that within developing countries themselves, there are wide differences in ICT use between large and small companies, between businesses in different industries, and between rural and urban businesses.

In addition, there is a growing divide in broadband access between businesses in developed and developing countries, which has an impact on the way that they can benefit from applications and systems. The broadband connectivity gap highlights the need for further improvements in the ICT infrastructure for developing countries, which in turn should have a positive impact on current problems of cost, latency and quality of services. The divide in ICT use between different-sized businesses seems to point at other critical factors that can be measured through other targets and indicators, such as education and skills development. Despite the recognition that the mobile revolution has made e-business more inclusive, through basic connectivity as well as through innovative mobile applications, the WSIS targets have not tracked progress in this area.

The e-business action line remains highly relevant for the implementation of WSIS-related work beyond 2015. Therefore, appropriate targets related to e-business should be included in any action plans beyond 2015, and relevant indicators should be defined for monitoring.

The *Partnership* recommends the setting of a new target: "Connect all businesses with ICTs" and its three related indicators:

- Indicator 11.1: Proportion of businesses using computers
- Indicator 11.2: Proportion of businesses using the Internet, by type of access (narrowband and broadband)
- Indicator 11.3: Proportion of businesses using mobile cellular telephones.

Indicators on the ways that ICTs are used could be proposed in addition to the ones on basic connectivity listed above. However, the fact that data availability for even these three indicators is lacking, begs the question of the feasibility of obtaining data for additional indicators. A proposal on new indicators would depend on the setting of new targets related to the post-2015 agenda and could be developed at a later stage in the framework of the core indicators on ICT use by businesses set by the *Partnership*.

To make the data as useful as possible, both to guide national policies and to provide international comparability, data collection has to be integrated into national statistical plans in order to ensure continuity (and meaningful time series) and the highest technical standard of official statistics.

The information economy is an integral part of the information society, and other aspects of business connectivity to ICT are also highly relevant to the overall WSIS agenda of universal access. Monitoring the connectivity and use of ICT by businesses will support the wider evaluation and formulation of ICT for development policies. For example, in respect of Target 6, e-government encourages an effective use of ICT by businesses in all sectors and the development of a domestic ICT-producing sector. As noted by the e-business action line co-facilitators "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." (ITC, UNCTAD and UPU, 2014)

Other policy aspects that enable or encourage the use of ICT by businesses are adequate regulatory and legal frameworks, and better business awareness of e-business opportunities. In the spirit of the WSIS process, multistakeholder partnerships between governments, development partners, international organizations, the private sector and civil society, can ensure that as many businesses as possible seize the opportunities offered by ICTs and reap their benefits.

Finally, the C7 e-business action line encompasses many more aspects of the information economy that are not covered by the proposed indicators. The latter aim to monitor basic connectivity related to universal access to ICTs. Targets to be defined for the post-2015 agenda could be forward-looking in considering the desired progress in the information economy between 2015 and 2025. Once targets are defined for the post-2015 agenda, stakeholders could propose other relevant indicators for monitoring progress towards any targets related to e-business, such as on e-commerce, on the ICT sector, or gender-related. Other recommendations on this action line have been made by the co-facilitators.[8]

List of references

Broadband Commission for Digital Development (2013), *Transformative Solutions for 2015 and Beyond*, http://www.itu.int/net/broadband/Documents/working-groups/BBComm-ManifestoNames.pdf.

ITC, UNCTAD and UPU (2013), *Enhancing the Role of E-Business for Development: WSIS+10 Review Open Consultation*, www.intracen.org/open-consultation/.

ITC, UNCTAD and UPU (2014), *WSIS+10 Overall Review of the Implementation of the WSIS Outcomes, Action Line: C7 (E-business), Draft Version 0.0*, www.itu.int/wsis/review/inc/docs/ralfreports/WSIS10_ALF_Reporting-C7_E-Business.pdf.

ITU (International Telecommunication Union) (2005), *World Summit on the Information Society Outcome Documents: Geneva 2003 - Tunis 2005*, http://www.itu.int/wsis/outcome/booklet.pdf.

ITU (International Telecommunication Union) (2010), *World Telecommunication/ICT Development Report 2010: Monitoring the WSIS Targets, A mid-term review*, http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtdr2010.aspx.

ITU (2014), *Manual for Measuring ICT Access and Use by Households and Individuals, 2014 edition*, http://www.itu.int/en/ITU-D/Statistics/Pages/publications/manual2014.aspx.

Partnership on Measuring ICT for Development (2011), *Measuring the WSIS Targets: A statistical framework*, http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wsistargets2011.aspx.

Partnership on Measuring ICT for Development (2013), *Partnership on Measuring ICT for Development WSIS Targets Questionnaire, 2013*, http://www.itu.int/en/ITU-D/Statistics/Pages/intlcoop/partnership/followup.aspx.

UNCTAD (United Nations Conference on Trade and Development) (2009), *Manual for the Production of Statistics on the Information Economy, 2009 Revised Edition*, http://new.unctad.org/templates/Page____885.aspx.

UNCTAD (2010), *Information Economy Report 2010: ICTs, Enterprises and Poverty Alleviation*, http://unctad.org/en/Docs/ier2010_en.pdf.

UNCTAD (2011), *Information Economy Report 2011: ICTs as an Enabler for Private Sector Development*, http://unctad.org/en/PublicationsLibrary/ier2011_en.pdf.

UNCTAD (2012a), *Information Economy Report 2012: The Software Industry and Developing Countries*, http://unctad.org/en/PublicationsLibrary/ier2012_en.pdf.

UNCTAD (2012b), *Mobile Money for Business Development in the East African Community: A Comparative Study of Existing Platforms and Regulations*, http://unctad.org/en/PublicationsLibrary/dtlstict2012d2_en.pdf.

UNCTAD (2013), *Information Economy Report 2013: The Cloud Economy and Developing Countries*, http://unctad.org/en/PublicationsLibrary/ier2013_en.pdf.

WSIS (2005), *Geneva Plan of Action, Action Line C7: ICT Applications, E-business*, https://www.itu.int/wsis/docs/geneva/official/poa.html#c7-16.

Endnotes

[1] The ILO was co-facilitator until 2008.

[2] These indicators were shown as A.1, A.2 and A.3 in the 2011 WSIS statistical framework.

[3] See http://unctadstat.unctad.org.

[4] Latest year available.

[5] See the European Commission's Digital Agenda Scoreboard at http://ec.europa.eu/digital-agenda/en/scoreboard.

[6] See http://www.gsma.com/mobilefordevelopment/programmes/mobile-money-for-the-unbanked/insights/tracker.

[7] See http://www.gsma.com/mobilefordevelopment/reading-the-m-pesa-half-year-results-for-2013-2014.

[8] See ITC, UNCTAD, UPU (2013).