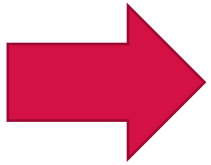
Working Group on Measuring
E-Commerce and the Digital Economy

Revision of the UNCTAD 2009 manual on Production of statistics on the information economy

Session 1: Structure and review of changes

José Luis Cervera and José Vila
DevStat
Consultants to UNCTAD

UNCTAD manual on Measurement of the **Information** Economy



UNCTAD manual on Measurement of the **Digital** Economy

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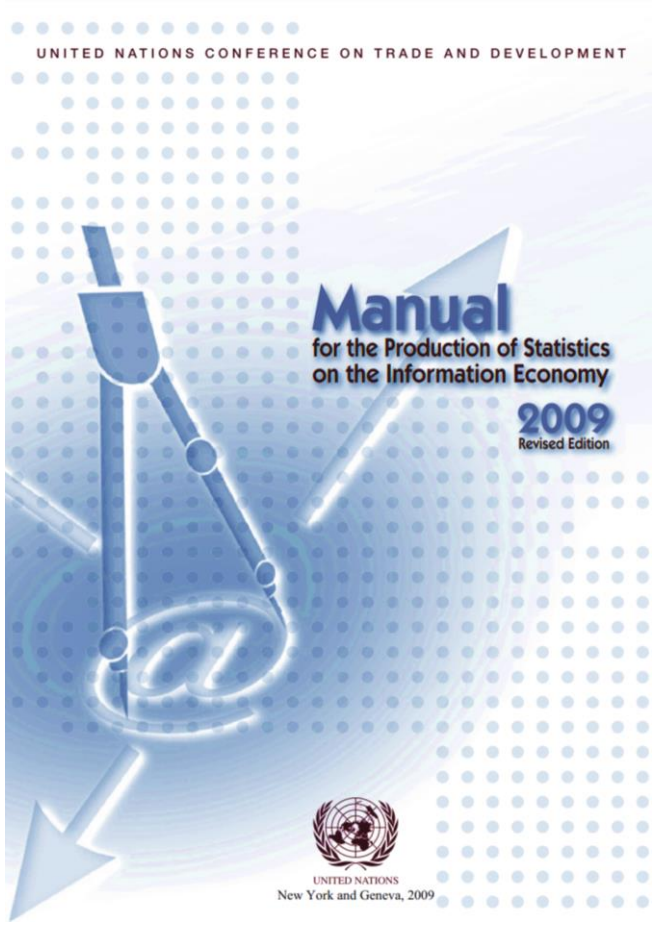
Structure of the 2009 Manual



The manual is a revision of the previous version of 2007

PART A. INTRODUCTION

- Chapter 1 - Objectives and overview of the Manual
- Chapter 2 - Background

PART B. METHODOLOGICAL ISSUES

- Chapter 3 - Conceptual frameworks for ICT measurement
- Chapter 4 - Standards for indicators on ICT use by businesses, the ICT sector, and trade in ICT goods
- Chapter 5 - Data sources and data collection methods
- Chapter 6 - Model questions and questionnaires for measuring ICT use
- Chapter 7 - Designing ICT business surveys and processing data
- Chapter 8 - Dissemination

Part C. INSTITUTIONAL ISSUES

- Chapter 9 - Cooperation and coordination

ANNEXES

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Subsections added in the 2009 revised version

2.1. Digital for development

3.3. Definition of ICT-enabled services

4.4. Measuring trade in ICT services

4.5. Measuring ICT-enabled services

4.6. Measuring e-commerce

5.1. Generic Statistical business process model (GSBPM)

6.3. Model questionnaire on trade in ICT-enabled services

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ANNEXES

Main changes in the 2019 version

From Information Economy to Digital Economy

- Measuring e-commerce, including cross-border approach
- Additional topics: cybersecurity, ICT investment and gender

Focus on ICT services and ICT – enabled services

- Trade in ICT services
- ICT – enabled services: definition and new model questionnaire

Additional data sources and collection methods

- Additional sources on cross-border trade
- Big data and experimental data

Main changes in each chapter

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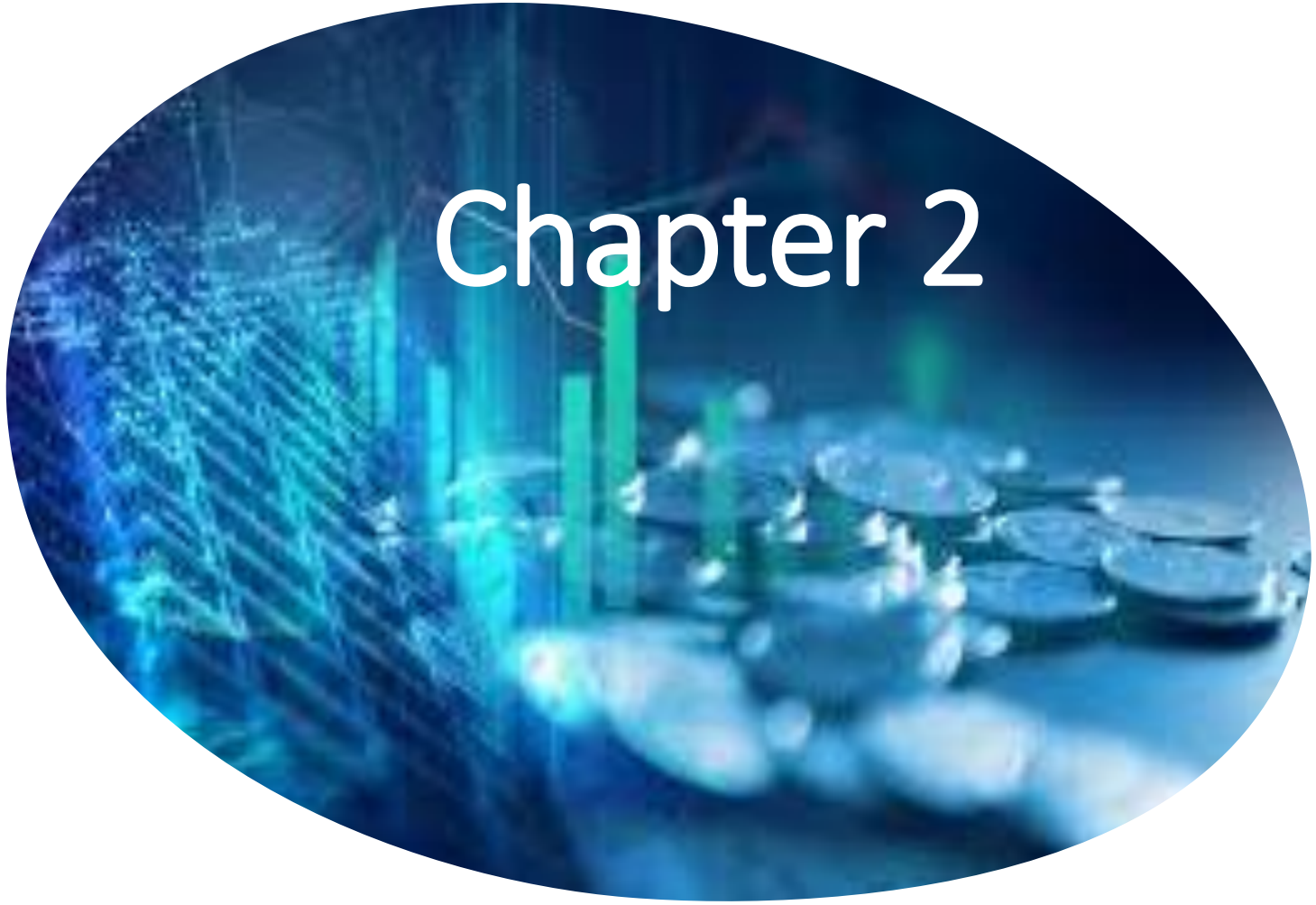

Chapter 2

Background

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Update of UNCTAD's work on measurement of digital economy and SDG-related ICT indicators

Update of other institutions (Partnership, G20, etc.) work on measurement of digital economy

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ICT and the SDG (additional indicators)

Indicator code	Indicator	Related SDG Targets	Collected by	Justification
PI16	Businesses using the Internet for Internet banking; for accessing other financial services	8.3	UNCTAD (from national ICT surveys)	This PI helps for measuring the target's aim as businesses' use of Internet banking increases their access to financial services.
PI20	Businesses using the Internet	17.8	UNCTAD (from national ICT surveys)	This PI measures the use of enabling technologies, which is part of the target.
PI23	Proportion of businesses receiving orders over the Internet	17.8	UNCTAD (from national ICT surveys)	This PI measures to what extent third parties make use of the Internet to conduct orders from businesses.
PI24	Proportion of businesses placing orders over the Internet	17.8	UNCTAD (from national ICT surveys)	This PI measures the use of enabling technologies, which is part of the target.
PI25	Business use of broadband subscriptions	8.2	UNCTAD (from national ICT surveys)	This PI helps for measuring the target's aim, in which the use of the Internet by business can benefit economies and support diversification, technological upgrading and innovation.
PI26	International trade in digitally-deliverable services as a percentage of total services trade (%)	8.2	UNCTAD calculations, based on UNCTAD, WTO, and ITC common data set on international trade in services	This PI helps measure the target's aim as digitalization increases export potential and opportunities in the services sector, and thus helps contribute to economic diversification, technological upgrading, job creation and encourage the growth of SMEs.

Target 8.2: *"…achieve higher levels of **productivity** of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors"*

Target 8.3: *"…promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage formalization and growth of micro-, small- and medium-sized enterprises including through **access to financial services***

Target 17.8: *"…fully operationalize the Technology Bank and STI (Science, Technology and Innovation) capacity building mechanism for LDCs by 2017, and **enhance the use of enabling technologies in particular ICT"***

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Chapter 3

Conceptual frameworks for the measurement of the digital economy

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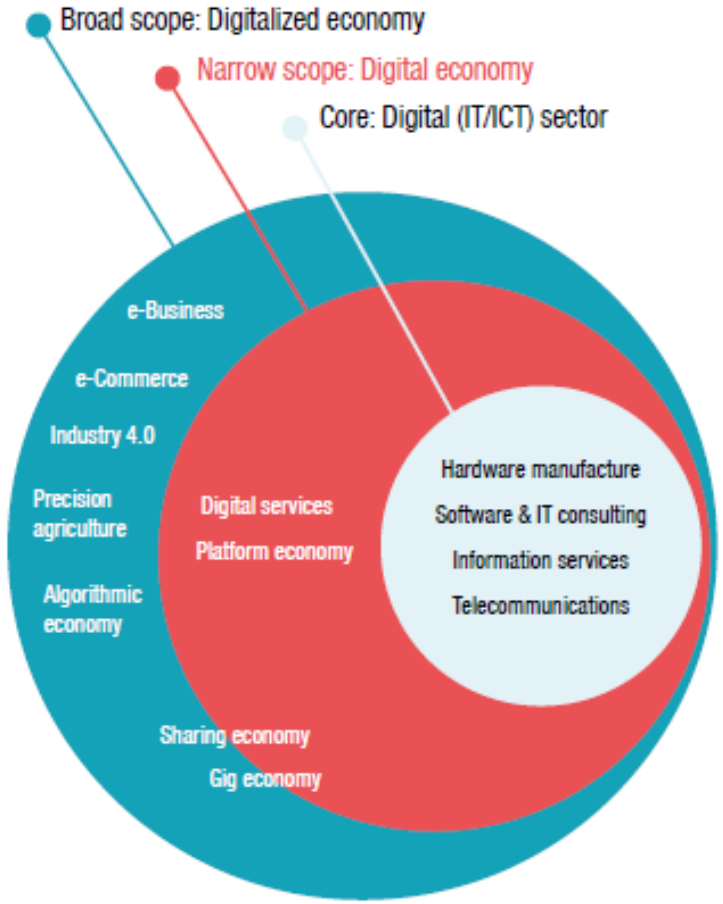
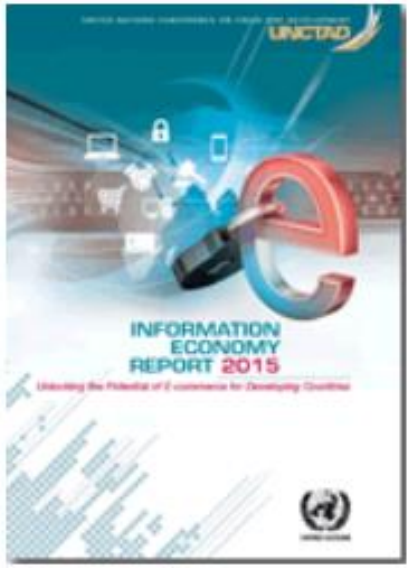
Conceptual framework: the digital economy



Source: Bukht and Heeks, 2017: 13.

- How digital technology is changing the patterns of production and consumption
  - Technology evolves faster than definitions and statistical standards!!
- From *production of ICT goods and services* to *digitalization* of (most) activities
- Need for **statistically measuring** different aspects:
  - R&D and innovation in the field of ICT
  - Production of ICT goods and services
  - Access (infrastructure), acquisition (trade, investment), use of ICT goods and services
  - Adoption of ICT for business processes (e.g. e-commerce)
  - Skills available and needed in the work force
  - Impacts of ICT in business performance and value creation

Main references: UNCTAD Information/Digital Economy Reports



Chapter 4

Standards for indicators on ICT use by businesses, the ICT sector, and trade in ICT goods and services

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Thematic coverage

2009	2019 / 2020
Use of ICT by business (of all sectors) ICT sector (employment, value added) Trade in ICT goods	Use of ICT by business (of all sectors) ICT sector (employment, value added) Trade in ICT goods Trade in ICT services ICT-enabled services E-commerce

New statistical standards

- Classification of **Industries** ISIC Rev 3.1 → ISIC Rev. 4
- Classification of **ICT goods**

  HS 2002 → HS 2007 → HS 2012 → HS 2017
- Classification of **ICT services**
- Classification of **ICT-enabled services**
- System of **National Accounts** 2008
- Classification of **trade in ICT services** EBOP 2010

Definition of ICT sector according to ISIC Rev. 4 (*OECD, 2007*)

ICT manufacturing industries

- 2610 Manufacture of electronic components and boards
- 2620 Manufacture of computers and peripheral equipment
- 2630 Manufacture of communication equipment
- 2640 Manufacture of consumer electronics
- 2680 Manufacture of magnetic and optical media

ICT trade industries

- 4651 Wholesale of computers, computer peripheral equipment and software
- 4652 Wholesale of electronic and telecommunications equipment and parts

ICT services industries

- 5820 Software publishing
- 61 Telecommunications
- 62 Computer programming, consultancy and related activities
- 631 Data processing, hosting and related activities; Web portals
- 951 Repair of computers and communication equipment

ICT sector

ICT goods

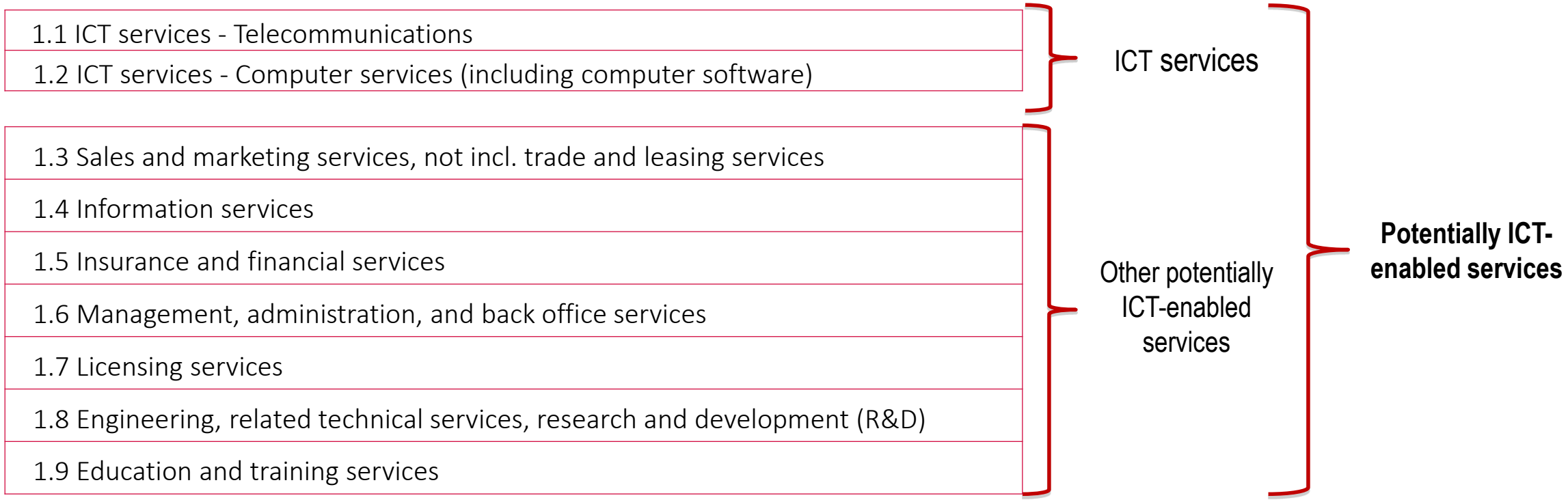
- Electronic components
- Computers and peripheral equipment
- Communication equipment
- Consumer electronic equipment
- Miscellaneous.

ICT-enabled services

ICT services

- Telecommunications services
- Computer services - Computer software
- Computer services - Other computer services
- Licenses to reproduce and/or distribute computer software

ICT-enabled services



Classification of trade in ICT services

EBOPS 2010	EBOPS 2010 description	CPC Ver.2.1	CPC Ver.2.1 description	ISIC Rev.4	ISIC Rev.4 description
8.3	Licenses to reproduce and/or distribute computer software	73311	Licensing services for the right to use computer software	5820*	Software publishing
9.1	Telecommunications services	841	Telephony and other telecommunications services	61	Telecommunications
		842	Internet telecommunications services		
		84631	Broadcasting services	60*	Programming and broadcasting activities
9.2.1	Computer services - Computer software	83143	Software originals	5820*	Software publishing
		8434	Software downloads		
		84391	On-line games		
		84392	On-line software		

Classification of trade in ICT services (cont.)

EBOPS 2010	EBOPS 2010 description	CPC Ver.2.1	CPC Ver.2.1 description	ISIC Rev.4	ISIC Rev.4 description
9.2.2	Computer services - Other computer services	8313	IT consulting and support services	6202*	Computer consultancy and computer facilities management activities
		83141	IT design and development services for applications	6201*	Computer programming activities
		83142	IT design and development services for networks and systems	6202*	Computer consultancy and computer facilities management activities
		8315	Hosting and information technology (IT) infrastructure provisioning services	6311*	Data processing, hosting and related activities
		8316	IT infrastructure and network management services	6202*	Computer consultancy and computer facilities management activities
		8713	Maintenance and repair services of computers and peripheral equipment	9511*	Repair of computers and peripheral equipment
		92919*	Other education and training services, n.e.c.	8549*	Other education

Core indicators

- **Indicators included already included in the 2009 version**
  - Core indicators on ICT use by businesses (B1 to B12)
  - ICT sector value added and employment (ICT1 and ICT2)
  - Trade in ICT goods: imports and exports (ICT3 and ICT4)

- **New indicators proposed in the 2019 version**
  - Trade in ICT services: imports and exports (ICT5 and ICT6)
  - Trade in ICT-enables services: imports and exports (ICT7 and ICT8)

Core indicators on trade in ICT services

ICT5: imports of ICT services as a proportion of total imports of services	ICT6: exports of ICT services as a proportion of total exports of services
Definition of concepts: ICT5 is calculated as the quotient of the value of imports of all ICT services divided by the total value of imports of services (expressed as a percentage).	Definition of concepts: ICT6 is calculated as the quotient of the value of exports of all ICT services divided by the total value of exports of services (expressed as a percentage).
Clarifications and methodological issues: ICT services include: - Telecommunications services - Computer services - Computer software - Computer services - Other computer services - Licenses to reproduce and/or distribute computer software	Clarifications and methodological issues: ICT services include: - Telecommunications services - Computer services - Computer software - Computer services - Other computer services - Licenses to reproduce and/or distribute computer software
Sources: BoP, FATS, …	Sources: BoP, FATS, …
Disaggregation and classifications: Can be disaggregated by EBOPS 2010 codes or with more detail by ISIC Rev. 4 codes.	Disaggregation and classifications: Can be disaggregated by EBOPS 2010 codes or with more detail by ISIC Rev. 4 codes.

Core indicators on trade in ICT-enabled services

ICT7: imports of ICT-enabled services as a proportion of total imports of services
Definition of concepts: ICT7 is calculated as the quotient of the value of imports of all ICT-enabled services divided by the total value of imports of services (expressed as a percentage).
Clarifications and methodological issues: Include all the potential ICT-enabled services presented in the previous slide.
Model question: UNCTAD questionnaire (chapter 6)
Disaggregation and classifications: Can be disaggregated by EBOPS 2010 codes or with more detail by ISIC Rev. 4 codes.

ICT8: exports of ICT-enabled services as a proportion of total exports of services
Definition of concepts: ICT7 is calculated as the quotient of the value of exports of all ICT-enabled services divided by the total value of exports of services (expressed as a percentage).
Clarifications and methodological issues: Include all the potential ICT-enabled services presented in the previous slide
Model question: UNCTAD questionnaire (chapter 6)
Disaggregation and classifications: Can be disaggregated by EBOPS 2010 codes or with more detail by ISIC Rev. 4 codes.

Other topics

- Investment in ICT
- Cybersecurity and privacy protection
- Gender approach

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Other topics (1): possible indicators on ICT investment

- Purchase of ICT hardware, software or services (% of enterprises, by type of expenditure)
- Expenditures on hardware, software or services (values and % relevance of expenditure by type)
- Channels used to acquire ICT goods and services (% relevance of each channel)
- Purchase of selected ICT services (% of enterprises and expenditure on each type of service).

Other topics (2): possible indicators on cybersecurity and privacy

- Existence of a formal policy to manage ICT security risks (% of all enterprises)
- Risks addressed by the ICT security policy of the enterprise (% of enterprise, by occurrence)
- ICT incidents (security breaches) encountered by the enterprise (% of enterprises, by occurrence)
- Security facilities or procedures in place (% of all enterprises).
- Collection or storage of personal information on end customers for analytical purposes (% of all enterprises)
- Methods of obtaining or collecting personal information on end customers (% of enterprises using each method). Methods may include: (a) Social media (e.g. Facebook, Twitter), (b) third party (e.g. Marketing firm), (c) directly from customers and loyalty or reward programmes.
- Formal policy to manage ICT privacy risks (% of all enterprises)
- Methods of protecting digital personal information (% of enterprises collecting information).

Other topics (3): Possible indicators on gender and ICT

- Proportion of small-business owners using the Internet, by sex of owner
- Proportion of small-business owners using mobile phones, by sex of owner
- Proportion of small-business owners using mobile phones, by type of activity and by sex of owner
- Proportion of small business owners using the Internet by type of activity and by sex of owner

- Sources may be business or household surveys

Required support from Expert Group for the revision

Required support from the Expert Group for the revision

- Revision of definitions and breakdowns of new indicators

- Country examples are welcome!
  - Inter-institutional cooperation, including the relationships among the users and producers of digital economy statistics.
  - The survey used to collect the data about the Information Economy if it is done independently from others, and if not, the module of the survey in which it is included. In this second case, we would also like information regarding the topics covered in the main survey.
  - The sampling frame used in the process (e.g. business registers).
  - Data collection methods, mainly focusing on the sampling process and which economic sectors are covered in it.
  - Examples of policy relevance

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Session 2: Model questionnaires

José Luis Cervera and José Vila
DevStat
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Chapter 5

Data sources and data collection

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Additions in data sources and collection methods

Linkage of administrative sources and statistical registers

- Administrative sources
- Statistical Registers → **Trade registers (COMTRADE, BoP)**
- Embedded survey modules
- Stand-alone surveys → **UNCTAD questionnaire on trade in ICT-enabled services (Chapter 6)**
- **Big data sources**

Additions in statistical registers: COMTRADE for the ICT trade indicators

- 3 billion data, covering over 170 countries/areas since 1962.
- Annual international trade statistics by commodities/service categories and partner countries.
- Data are made publicly available on the internet and can be easily acquired using the data acquisition API provided by UN COMTRADE.
- UN COMTRADE contains:
  - Data on imports, exports, specifying annual data of each commodity by trading partner
  - Value of the transactions in US dollars, weight and secondary quantities.
  - Commodities are reported in the current classification and revision (HS 2012 in most cases as of 2016)

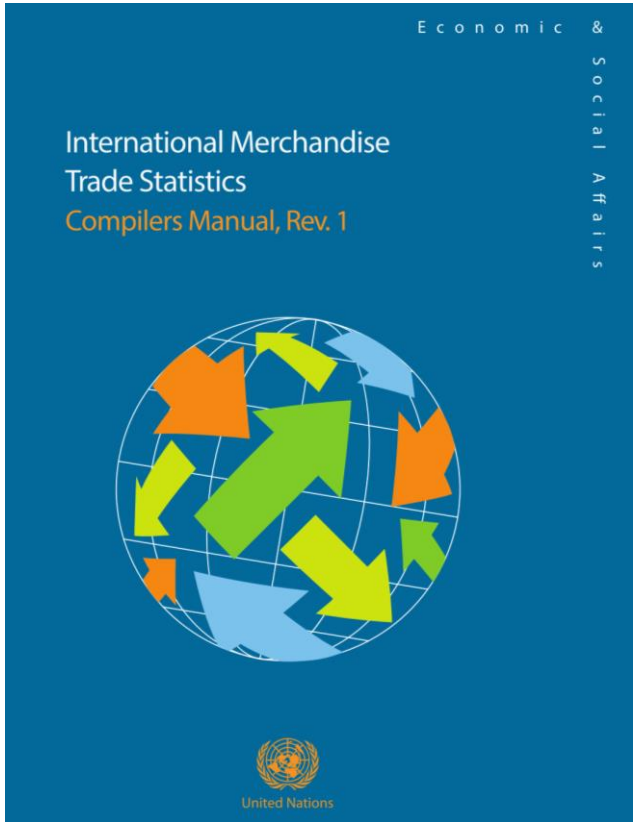
Additions in statistical registers: BoP register of service exporting firms

- Balance of Payments (BoP) registers of service exporting firms compile companies involved in foreign trade:
  - BoP registers cn be used as **sampling frame** for surveys of ICT trade of goods, ICT services and ICT-enabled services
- BOP register should include the basic identification variables and key economic variables (nature and type of exports and imports performed over the last few years).
- Firms are classified according to standard services categories and subcategories according to EBOPS 2010 classification.
  - They did not include information by partner country or by mode of service supply.

Additions: Linkage of business and trade registers

- Linkage makes feasible to classify ICT trade indicators in terms of enterprises characteristics with no additional costs in data collection:
  - Critical issue: existence of a common identifier.
- Statistical units and classifications and proper correspondences need to be established.
  - Trade registers are recorded on the basis of transactions assigned to a trade operator identified on the basis of the declaring unit.
  - The statistical unit of the business register is the enterprise.
  - The linkage of both registers requires:
    - The identification of the potentially multiple trade operators of each enterprise
    - The correspondence between the HS classification of commodities (as generally used in trade registers) and the ISIC classification (as generally used in business registers)

Additions: Integration of customs and non-customs data



- Customs records reflect the physical movement of goods across borders and are generally reliable, detailed and readily available in most countries. However, they may not provide full coverage of all transactions, or they may not be subject to adequate statistical quality control.

- Non-customs data sources can be used by compilers to obtain information that would otherwise not be available (surveys, parcel and letter post records, etc.)
  - The use of non-customs data sources may increase the burden on data providers and compilers.
  - These sources may suffer from a lack of a consistent classification

- Non-custom data may allow for the quantification of special categories of goods and specific terrirories.

Additions: Integration of customs and non-customs data

ISSUES

- Conceptual differences between sources
- Delays in data forwarding and unsynchronized provision of data
- Risk of double counting
- Different data submission media or incompatible computer data files
- Need to cross-check data from complementary sources

MITIGATION

- Transform, Harmonize, Assess, Edit and Validate microdata
- Developing estimation and imputation
- Campaigns and training to sensitize and qualify on trade statistics
- Promotion of consistent terminology and standard classifications
- Establishing direct computer links with data suppliers to facilitate data
- Coordinating the installation of computer hardware and software in the compiling and source agencies to ensure their compatibility

Additions: new data sources and collection methods

Big data sources and automatic data acquisition

Behavioural – experimental data collection

New data sources

Big Data and automatic data collection

Big data

- Digital behavioural footprints generate large amounts of information known as big data:
  - Telecommunication operators, satellite companies, online platforms, social networks and Internet of Things (IoT), etc.

- The volume, timeliness and heterogeneity of big data opens new opportunities for measurement with better timeliness and granularity at a lower cost.
  - Gathering and analyzing big data requires is somewhat complex and requires specific methods, including web scrapping or data science techniques.

- Big data are not in general exhaustive neither representative
  - Integration of big data with information obtained from registers or censuses or representative random-sampling surveys is required to analyse and correct these potential biases.

Big data from Telecomm companies

- Big data sources generated by telecommunications companies are of special interest for the estimation of the core ICT indicators and measurement of the digital economy
  - Telecommunication operators generate Call Detail Records (CDR) documenting the features of telecommunications transaction.
  - CDR contain the relevant attributes of a call (source number and destination number, GPS localisation or duration).
  - Telecommunication companies register the activity in the network, including for instance internet usage or mobile money transfers.

- Big data sets obtained from the mobile network seems to have the widest socioeconomic coverage in developing countries
  - They allow acquisition of information from microenterprises and SMEs, even in the informal economy.

Big data acquisition

- Automatic data acquisition of publicly available data
  - Web scrapping
  - APIs and embedded downloading functionalities

- Collaboration strategies with telecom operators and other data owners (online platforms, etc.)

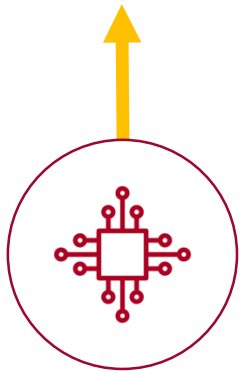
Example: the International Public Procurement Initiative (IPPI)

Acquisition of publicly available contract data

Contracts & barriers database

(> 38 million awarded contracts; > 350 barriers)

Legal and policy analysis



e-procurement & transparency portals

Empirical evidence

Public procurement law and policy

New data sources

Behavioral Economic Experiments (BEEs)

Experimental data collection

- Experiments compare how companies behave under different designs of policies (experimental treatments) and quantifies the impact that can be attributed to the policy design.

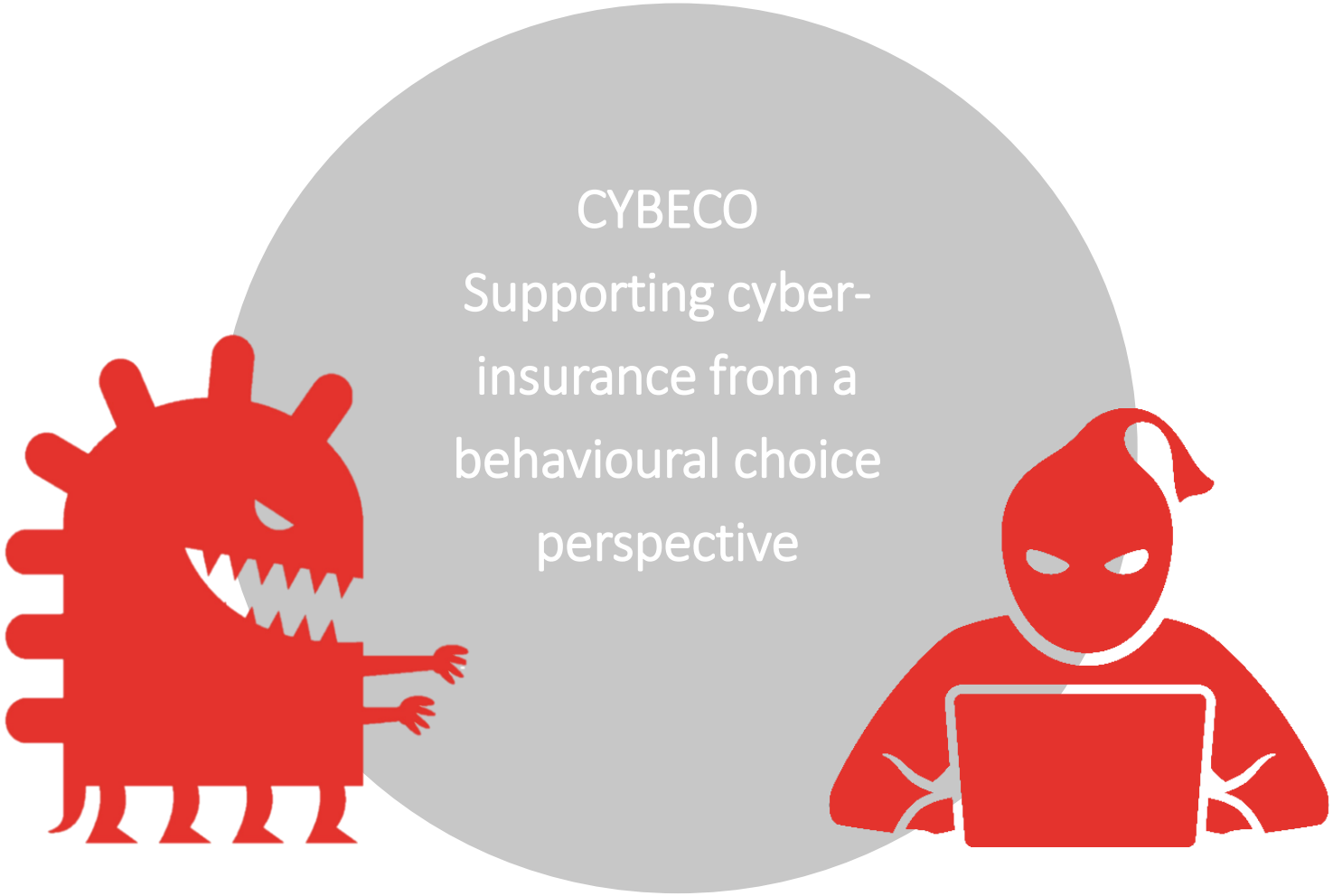
- The core of the experimental method is the random allocation of companies to the different treatment groups
  - Assuming that randomisation makes of all the treatment groups perfectly comparable, the differences in the digital behaviour can be attributed to the exposition to the behavioural intervention in the treatment group.

Experimental data collection (cont.)

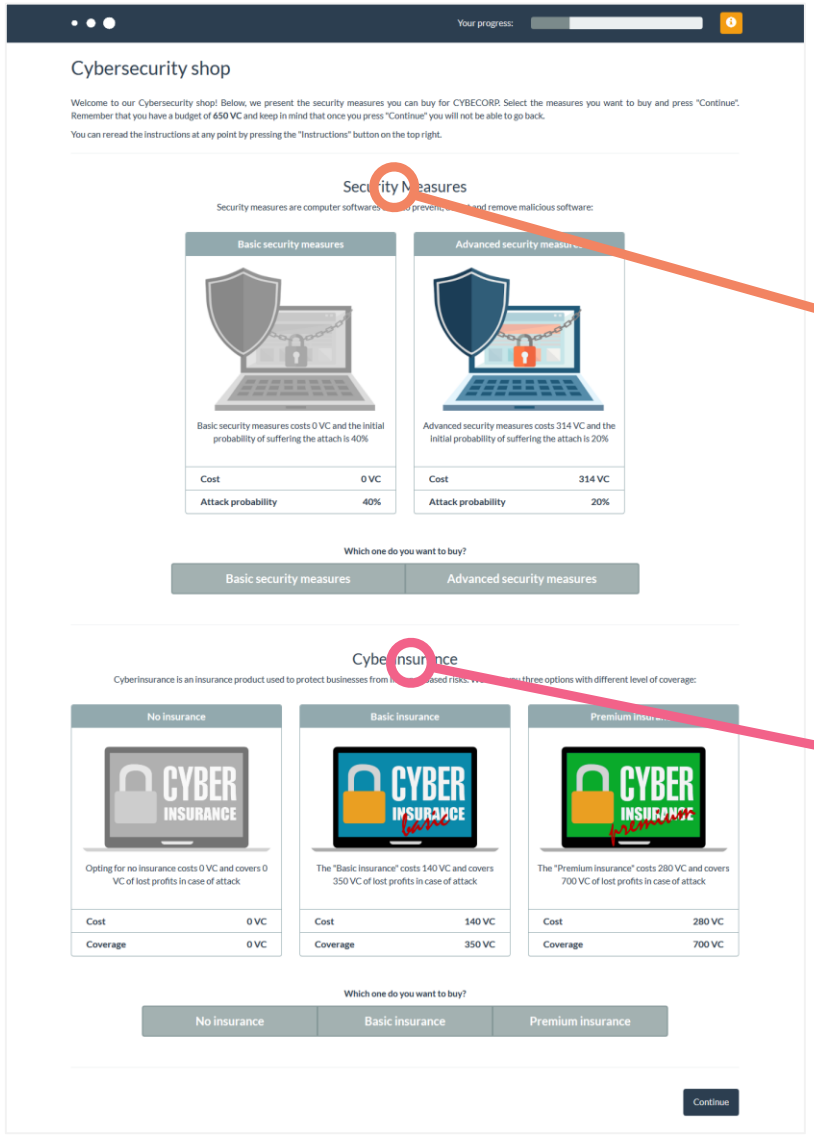
- Field experiments are implemented in a real-world situation
  - They raise logistic and ethical concerns which limit their application

- Behavioral Economics Experiments (BEEs) provide a feasible alternative to observe actual digital behavior:
  - A company is invited to make their decisions not in a real but in a gamified controlled environment.
  - The central feature of a BEE is that the decisions made by the participants in the experiment has an actual impact, for instance by considering variable economic incentives depending in subjects' decision and random changes in the gamified environment.
  - Incentivization increases the attention paid during the participation in the experiment and induces in the respondent a mental state similar to that of real decision-making.

Experimental data collection: an example



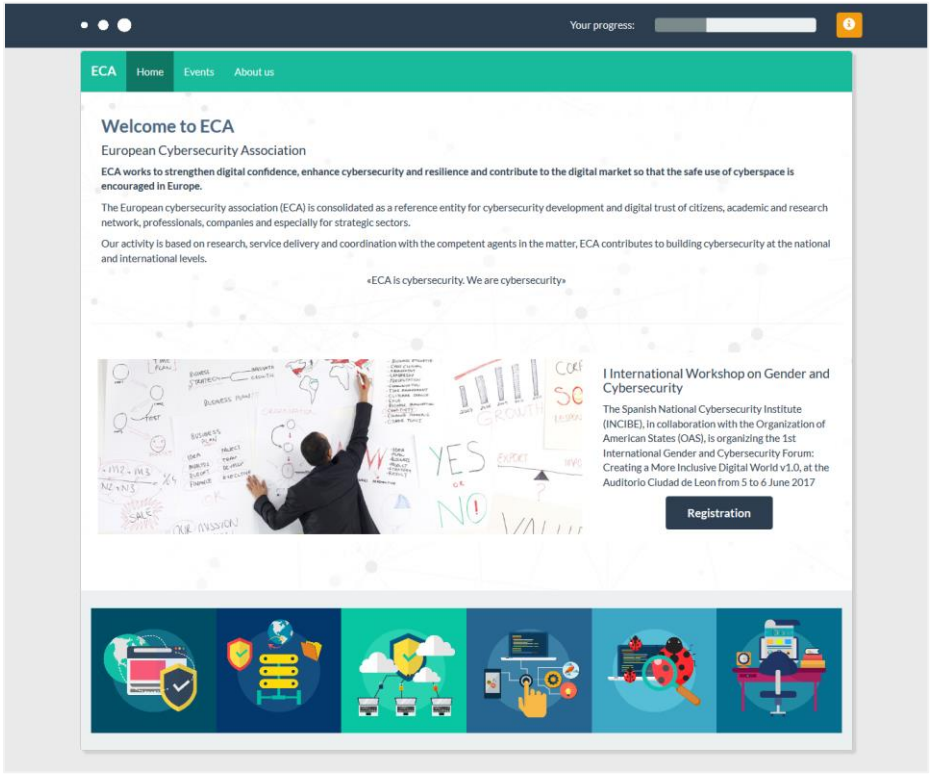
CYBECO experiment



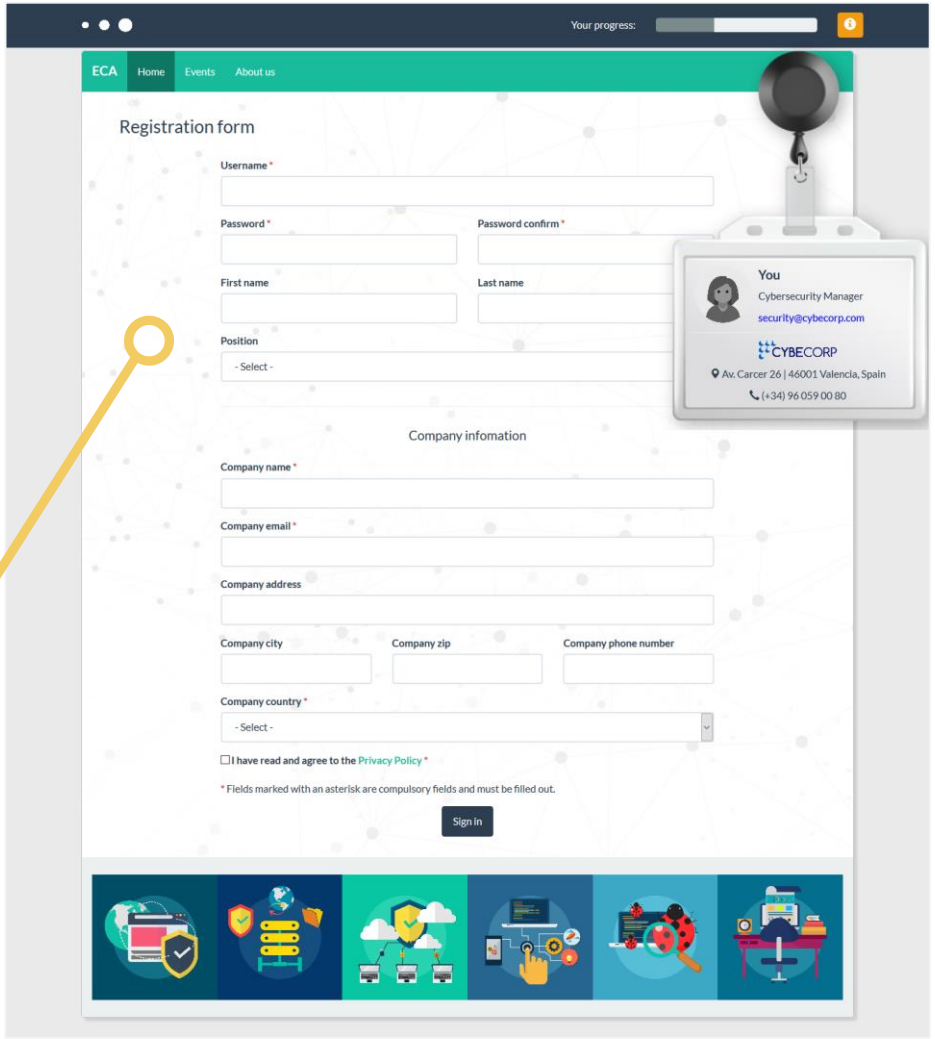
Cyber-protection meassures

Cyber-insurance products

CYBECO experiment



Online behaviour



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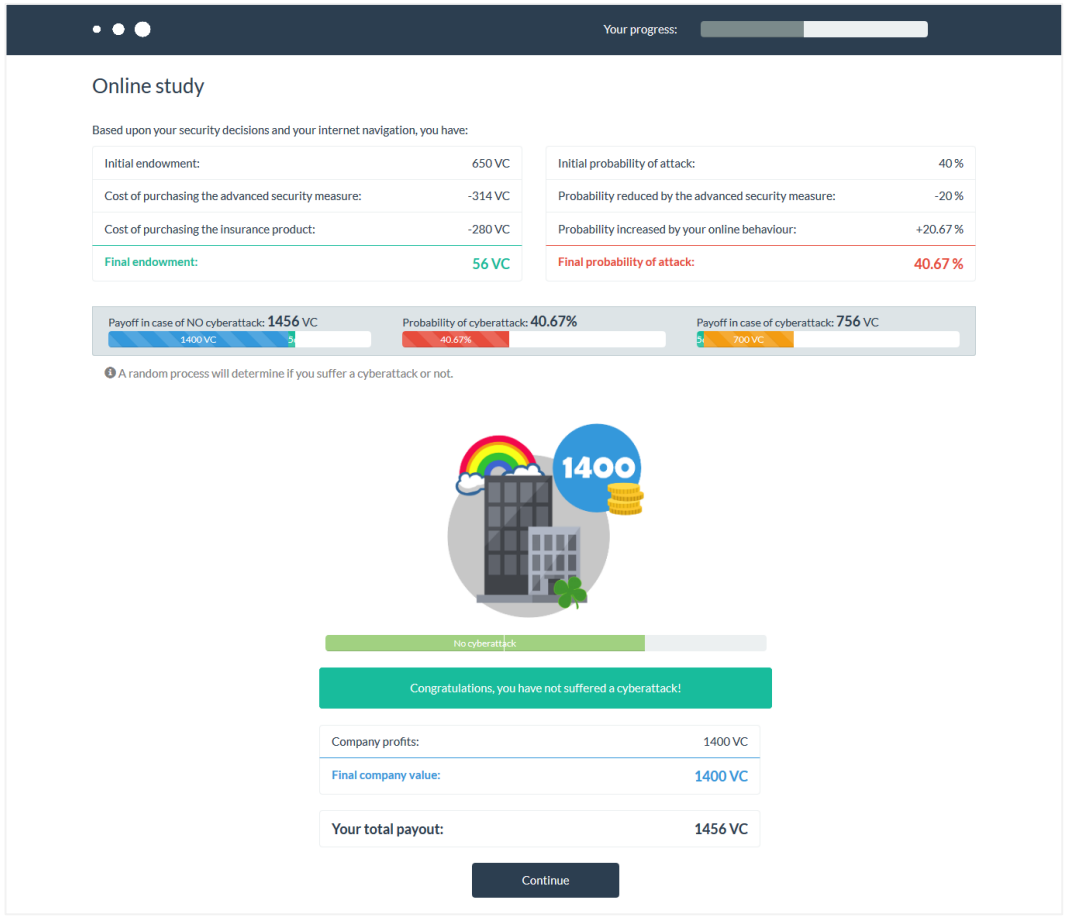
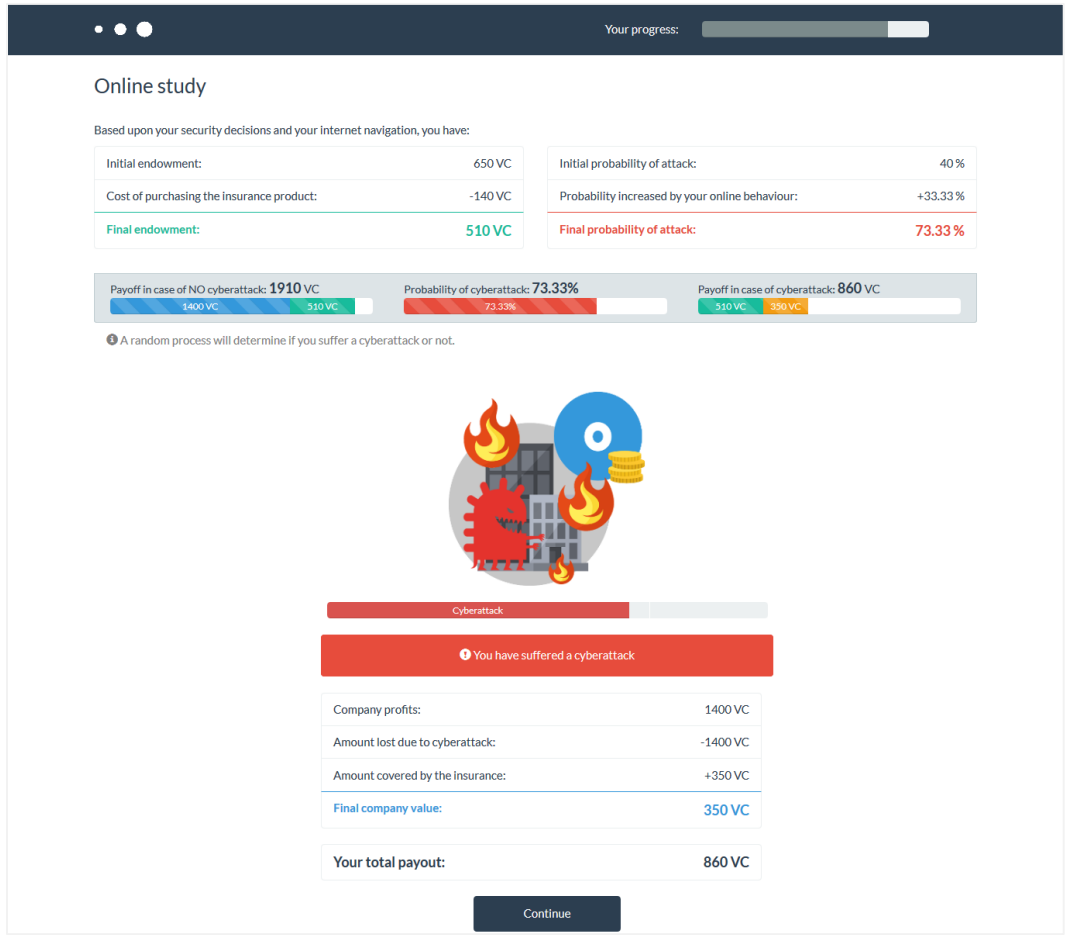
CYBECO experiment





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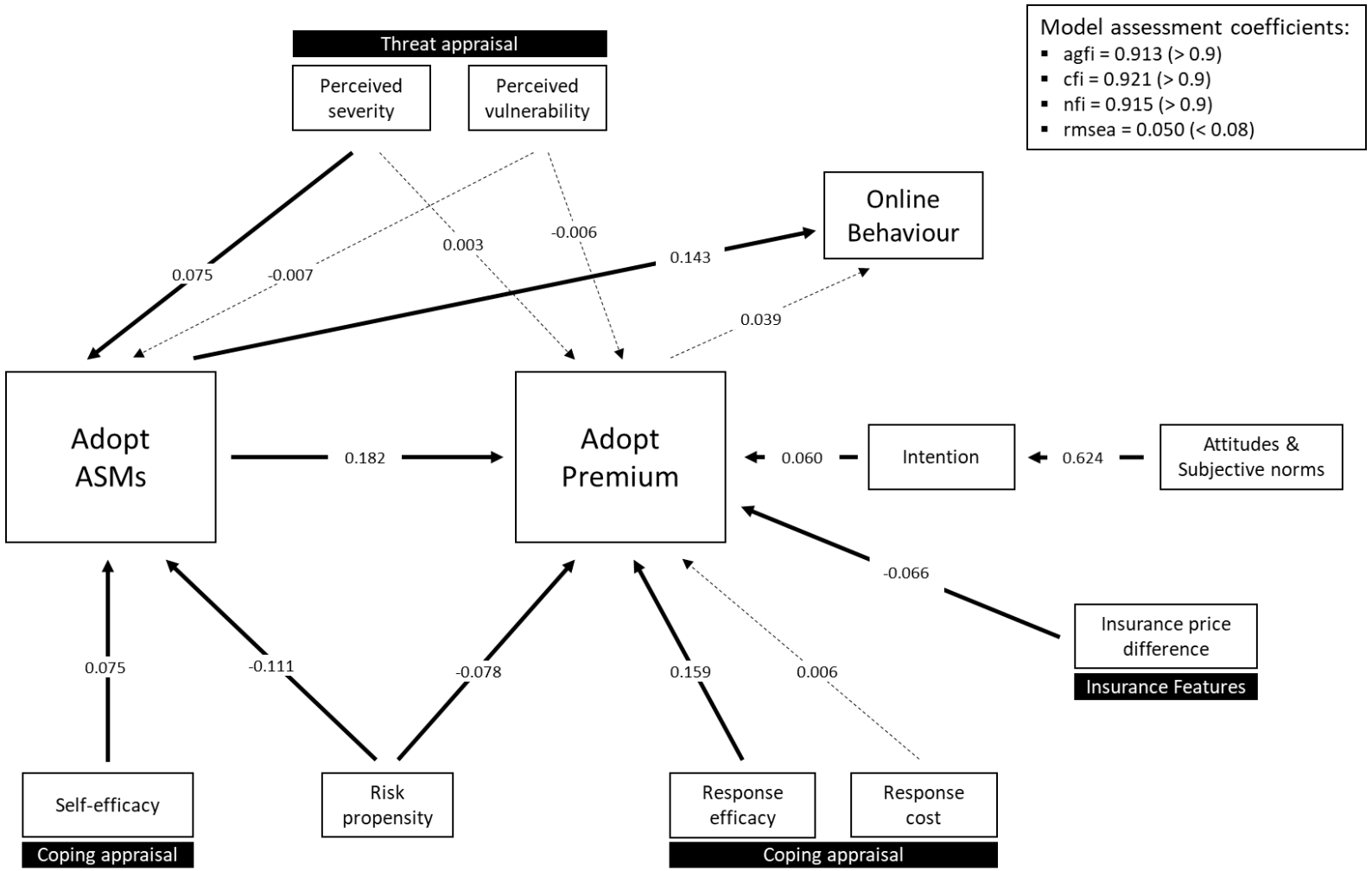
CYBECO experiment: results



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Chapter 6

Model questionnaires

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UNCTAD model questionnaires

- UNCTAD model questionnaire on use of ICT in businesses (no update from the 2009 version)

- UNCTAD model questionnaire: exports of services that can be delivered over ICT networks
  - The model was tested during 2016 and 2017 in Costa Rica, India and Thailand
  - The final version was presented at the UNCTAD E-commerce Week 2018.
  - The questionnaire comprises three parts:
    - Basic information about the enterprise.
    - Identification of exports of services that were delivered remotely over ICT networks.
    - Detailing of ICT-enabled exports by type of service, mode of delivery and partner economy

Key concepts in the questionnaire

- A **Non-resident** is any individual, enterprise, or other organization ordinarily domiciled in an economy other than [Country].
  - Subsidiaries of non-resident enterprises in [Country] are residents of [Country].
  - Foreign subsidiaries of [national] enterprises are non-residents.

- **Exports of services** are sales of services provided to non-resident importers.
  - They correspond to services for which payment is made directly to your enterprise by a non- resident entity.
  - Exports include services provided by your enterprise or its employees working abroad, or some other resident entity on whose behalf your enterprise receives payment.
  - Exports exclude services that are provided to non-residents by your enterprise and paid for through other unrelated resident entities.

Key concepts in the questionnaire (cont.)

- Services can be exported in four different **Modes of supply**:
  - First, your enterprise may remotely deliver services to a customer abroad through the Internet, phone, postal mail or email (**cross-border supply**).
  - Second, you may deliver these services to a non-resident customer temporarily present in your country (**consumption abroad**).
  - Third, your enterprise may have established a commercial presence in a foreign country to deliver services in the country of the consumer (**commercial presence**).
  - Fourth, services can be delivered by one of your employees temporarily working abroad (**presence of natural persons**).

A. General information

A. 1. Name of the enterprise

A. 2. Reference number

A. 3. Address

A. 4. Name of the person who fills out the questionnaire and contact details

A. 5. Was your enterprise controlled by another enterprise at the end of YYYY?

An enterprise is controlled when a different unit owns directly or indirectly, more than 50 per cent of the equity or shareholders' voting rights.

O Yes (please go to question 6)

O No (please go to question 7)

A. 6. What was the location of the controlling unit of your enterprise at the end of YYYY?

A. 7. How many persons were employed in your enterprise at the end of YYYY?

The number of persons employed includes all persons who are on the payroll of the enterprise, whether they are temporarily absent (excluding long-term absences), part-time, seasonal or home workers, apprentices, etc. The number of persons employed excludes manpower supplied to the unit by other enterprises and persons carrying out repair and maintenance work in the enquiry unit on behalf of other enterprises.

A. General information

A.8. What proportion of persons employed by your enterprise at the end of YYYY were:

Male (%) / Female (%)

A.9. What was the principal activity of the enterprise at the end of YYYY?

International Standard Industrial Classification of All Economic Activities, Rev.4, two digits

A. 4. A. 10. What was the total value of turnover made by your enterprise during YYYY?

This includes only turnover of your enterprise; do not include affiliates or other group-related enterprises. Turnover comprises the totals invoiced by the enterprise during the reference period; this corresponds to market sales of goods or services supplied to third parties; include all duties and taxes on the goods or services invoiced by the unit with the exception of value-added tax invoiced by the unit to its customer and other similar deductible taxes directly linked to turnover; include all other charges (transport, packaging, etc.) passed on to the customer. Price reductions, rebates and discounts as well as the value of returned packing must be deducted. Exclude income classified as other operating income, financial income and extraordinary income in company accounts; as well as any operating subsidies received from public authorities.

	Value (in thousands national currency)
TOTAL turnover	
Of which turnover from services sold	

A. General information

A. 11. What was the total value of exports of services of your enterprise at the end of YYYY?

Export of services is defined as the provision of services by your enterprise to a non-resident unit. Please exclude sales through a foreign subsidiary of your enterprise domiciled abroad.

	Value (in thousands national currency)
TOTAL export of services	
Of which intra group trade	

A. 12. At the end of YYYY did your enterprise have a subsidiary or any other commercial presence in an overseas country?

Yes / No / Do not know

A. 13. During YYYY did your enterprise deliver services abroad by one of its employees, temporarily working abroad?

Yes / No / Do not know

A.14. During YYYY did your enterprise deliver services to overseas customers, temporarily in [Country]?

Yes / No / Do not know

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B. Filter question on services exports to be included

For which of the following broad categories has your enterprise exported services during the reporting period (simply indicate yes or no)?

Export of services is defined as the provision of services by your enterprise to a non-resident unit. Please exclude sales through a foreign subsidiary of your enterprise domiciled abroad.

Category of service	Yes/ No	If yes, please complete the corresponding section in Part C
Telecommunications		1
Computer services (including computer software)		2
Sales and marketing services, not including trade and leasing services		3
Information services(includes among others telemedicine/health services, as well as audiovisual services, on-line content and recordings of live performance)		4
Management, administration and back office services (includes among others online reservation services for accommodation, online staffing services, telephone call centre services and other telephone-based support services)		5
Licensing services		6
Engineering, related technical services and R&D		7
Education and training services		8

C. Details of services exports that can be delivered remotely over ICT networks

C.X.1. Total value of exports in thousands national currency

Please include services provided by your enterprise to non-resident units. Exclude services provided through a foreign subsidiary of your enterprise domiciled abroad.

	Exports
Name of the category	

C.X.2. Exports delivered remotely from [Country] across international borders to customers overseas over ICT networks (%)

Include receipts from international telephone calls and any other telecommunications services delivered remotely across the border through ICT networks. Also include receipts from international roaming charges. Exclude on-site services delivered by employees travelling to clients' offices as well as services delivered in-person to a client travelling to meet the service supplier.

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	Proportion of total telecommunications exports (%)
Exports delivered remotely, not on-site or in-person	

C. Details of services exports that can be delivered remotely over ICT networks

C.X.3. Exports by main trading partner country (%)

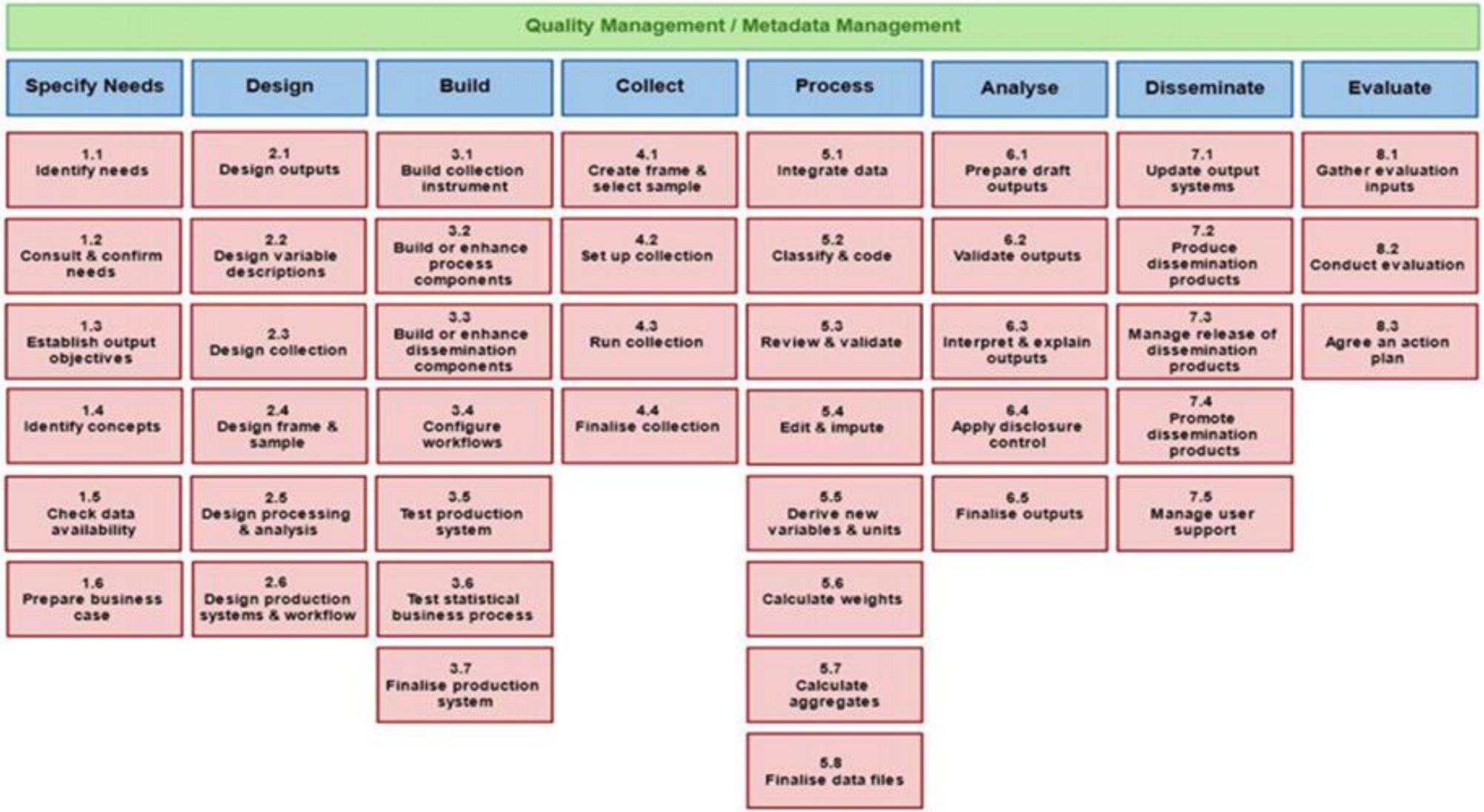
	Proportion of total telecommunications exports (%)	Proportion of cross-border telecommunications exports (%)
Major trading partner (1): please specify country		
Second major trading partner country: please specify		
Third major trading partner country: please specify		
Fourth major trading partner country: please specify		
Fifth major trading partner country: please specify		
Rest of the world		
Total		100%

Designing ICT business surveys and processing data

UNITED NATIONS
UNCTAD

devstat

General Statistical Business Process Model (GSBPM)



Chapter 8

Dissemination

UNITED NATIONS
UNCTAD

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UNCTAD questionnaire on ICT enabled services

- New tables required by UNCTAD for the collection of national data

- Data visualisation

Required support from Expert Group for the revision

Required support from the Expert Group for the revision

- Revision of definitions and breakdowns of new indicators

- Country examples are welcome!
  - Inter-institutional cooperation, including the relationships among the users and producers of digital economy statistics.
  - The survey used to collect the data about the Information Economy if it is done independently from others, and if not, the module of the survey in which it is included. In this second case, we would also like information regarding the topics covered in the main survey.
  - The sampling frame used in the process (e.g. business registers).
  - Data collection methods, mainly focusing on the sampling process and which economic sectors are covered in it.
  - Examples of policy relevance

Thank you

José Luis Cervera and José Vila

jcervera@devstat.com and jvila@devstat.com

DevStat

Consultants to UNCTAD