# ICT Sector Review for enterprises and households with the Palestinian Central Bureau of Statistics (PCBS)

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# **Background**

The EFTA Statistical Office (ESO) is part of the EFTA Secretariat, an international organisation with duty stations in Geneva, Brussels and Luxembourg. EFTA Member States are Iceland, Liechtenstein, Norway and Switzerland.

ESO is sited in the same premises in Luxembourg as Eurostat, the Statistical Office of the European Union. It was originally founded some 30 years ago as a "liaison office" between those EFTA States that are members of the European Economic Area (EEA) Agreement (Iceland, Liechtenstein and Norway), the EU Member States and Eurostat with the aim of accompanying the EEA EFTA States' integration into the evolving European Statistical System (ESS). Over these years, all EFTA Member States have become full ESS members, and ESO's activities have broadened, including today also activities in the field of statistical technical cooperation with third countries on behalf of all EFTA Member States. In cooperation with Eurostat and other international organisations, as well as individually, ESO regularly conducts stocktaking exercises with statistical offices of third countries, comparing different aspects of statistical production to European standards as they are defined in the ESS.

The present Sector Review on Information and Communication Technology (ICT) statistics is one example of such an exercise. It has been organised and conducted in spring 2021 by the EFTA Statistical Office on request of the Palestinian Central Bureau of Statistics (PCBS) and the Statistical Office of the European Union, Eurostat.

The expert panel consisted of Mr. Anton Örn Karlsson (Hagstofa, Statistics Iceland), Mr. Bendik Hjelde Pay (SSB, Statistics Norway), Mr. Walther-Zhang Yun (SSB, Statistics Norway) and Mr. Volker Täube (EFTA Statistical Office).

The experts would like to thank the colleagues from the PCBS for their constructive collaboration in this endeavour.

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#### Introduction

There is no doubt that the use of information and communication technologies (ICT) has altered modern societies in manifold ways. ICTs have changed the way in which we communicate, how we search and find information, work, conduct business, and interact with government agencies or how we manage our social lives.

Often ICTs provide for competitive advantages to households as well as to enterprises while allowing for access to otherwise unavailable information, or contribute to increases in productivity. In this sense, digitalization increases productivity and efficiency while reducing costs; ICTs account today for a significant part of European productivity and growth. But societies differ with regard to possibilities for individual access to ICTs, which underlines the necessity of reliable information on the current situation in order to allow for informed political decisions that address apparent inequalities.

Hence, the extent and the ways in which enterprises and households use modern communication technologies informs about the level of digitalization of a given society. Knowledge about the spread and use of ICTs can reveal necessities for political or economic actions in order to ensure that the potential of ICTs can unfold and is accessible to everyone.

Official statistics provide such information by means of dedicated surveys. In following internationally agreed nomenclatures and using standardized methodologies, these statistics allow for international comparisons that are instructive for determining levels of digitalization and how they impact on different spheres of societies.

In the European Statistical System (ESS), Official Statistics on ICT are produced by means of dedicated ICT surveys for households and enterprises. The respective ESS "model questionnaires" for households and enterprises are set-up by expert groups and constantly revised. The legal basis for ICT statistics in the ESS is regulation (EC) No 808/2004; the latest amendment of (EC) No 808/2004 is Regulation (EC) No 1006/2009 of the European Parliament and of the Council of 16 September 2009.

The current report on the EFTA ICT Sector Review with PCBS has been conducted with reference to the current ESS methodology. The recommendations made in this report follow

<sup>&</sup>lt;sup>1</sup> See also Eurostat's website: Methodology - Digital economy and society - Eurostat (europa.eu)

this methodology. Nothing will be said about other methodologies and approaches for capturing ICT related statistics and it remains with the respective experts in PCBS to decide which approach to realize.

# 1. ICT in enterprises

The main objective of the present review of the PCBS ICT enterprise questionnaire is to evaluate the items and indicators in the 2020 survey as well as the existing methodologies, including the sampling frame and the sampling design. Moreover, the second objective is to provide guidelines and recommendations that can contribute to further development of the PCBS ICT enterprise questionnaire in line with the European model questionnaire for measuring ICT in enterprises and the respective methodology.

# 1.1 Review of the ICT enterprise survey questionnaire 2020

The draft version of the PCBS 2020 ICT in enterprises survey consists of twelve sections including one R&D section. The questionnaire contains a total of 105 questions with 94 questions relating to the ICT sector. Most of the questions are of qualitative nature and only a few questions are quantitative ones. The questions are addressing overall two target groups:

- a) for all enterprises; and
- b) for enterprises with access to internet.

The answers to the qualitative questions allow either for multiple-answers or for single-answers.

#### Comments and suggestions:

The draft PCBS ICT survey questionnaire is similar to Eurostat's model-questionnaire used throughout the European Statistical System (ESS) and covers many of the respective indicators. Furthermore, although there is similarity in wording, filters and scope (target populations) of the questions we think that there is room for some improvement.

# **Reorganizing the sections:**

Some of the questions and items in the PCBS ICT enterprise questionnaire are somewhat dislocated with regard to the sections they are placed in. The questions pertaining to the same target population and/or belonging to the same theme should be located in the same section. To organise the questions and items in this way might contribute positively to the flow of answers by the respondents which, in turn, could increase efficiency while spending less time to go forth and back during the interview and it may reduce the number of potential errors due to confusion of the target population.

As a general matter, questions (or answer options) should not appear simultaneously or be repeated in other sections. In case two questions are similar to each other the distinctive characteristics should clearly be specified in order to avoid any irritations on the side of the respondents.

# Reorganizing the questions and answers:

Regarding the issues of data quality and nonresponse, we recommend that it should be avoided to use questions and answers that are predominantly of a subjective or personal nature (e.g. EV02: "During 2020, did the use of technology affect the work in the enterprise?"), or those that are too sensitive, too technical or too detailed. If the answers are somewhat obvious, it might be advisable to rather aim at a subjective ranking of options; e.g.: "which/what is the most important/main reason to...".

Some of the questions contain too many answer options. The answers should be shorter and categorized by the same theme/type/main activities. In case there are similar questions (or answers), these should be merged into one question. Sometimes, the answer-options are not exhaustive; as long as the provided standardized answers cover the main subjects it is acceptable to add the "other: please specify" option as a kind of "all the rest" category. Moreover, for questions that can easily be confused or misinterpreted, it could be helpful to specify, e.g. what should be left out: "Please do not include"; concrete time frame: "only for 2021"; or concrete technology: "use ERP as a Cloud service", etc.

Furthermore, questions or answers that are not of a manifest interest for analysis or which are outdated should be omitted.

In case there is no filter on some particular questions, e.g. "What are the reasons for not using AI?", then there should be an additional answer option closing that question, e.g. "No need for AI / AI is not useful".

# 1.2 The survey design: the importance of quality data

A well-designed survey is important to collect high quality data. In line with the principle of Eurostat's Code of Practice, the frame of survey should take the response burden into account; this means that the response burden should be proportionate to the needs and is not excessive for respondents.

In order to achieve the collection of high-quality data while minimizing the response burden, we have the following recommendations:

#### 4. Flow in the survey:

The correct order of the elements in the survey enhances the flow of answers. This pertains to questions or answers that belong to the same category or theme, filters and sections. The continuity in the survey can minimize errors caused by misinterpretation or confusion of questions, e.g. the follow-up question should appear right after the filter-question. Moreover, it can start with an overarching question while arranging the questions by a top-down approach instead of bottom-up, e.g. "The total number of employees using internet..." followed by "The total number of employees using computers connected to the internet". The top-down arrangement of question is considered having a controlling effect that can minimize misinterpretation.

# 5. Wording:

In the previous section we mentioned the importance of clear formulations of questions and instructions. The general recommendation is to use simple and clear wording. Experience shows that people prefer short and understandable questions (using everyday-language). In addition, many people dislike reading long and technically demanding instructions, reason why such explanations should equally be held concise and clear.

# 6. Optional questions or questionnaires:

Regarding the differences of characteristics like enterprise size, economic activities and similar, it may be advisable to keep some of the questions optional. For example, it seems unlikely that a construction enterprise with only 2 employees uses techniques of Big Data analysis or AI technology. In this case, the enterprise may

answer the question if it is optionally; or you may consider an optional questionnaire (simplified version for some subgroups) that contains only the common questions.

# 7. Controls in the survey:

We recommend to add controls in the survey directly considering that it has a validation effect on the raw data in terms of limiting errors, thus less need for audition of the collected microdata, e.g. "the value of web sales and EDI cannot be more than 100% of the total turnover" or "the percentage of employees using computers connected to internet cannot be larger than the percentage of total employees with access to the internet", etc.

We recommend to add comment-fields in each section or below the questions to allow for elaboration on answers that are not exhaustive or not 100% accurate, etc. We experienced an improvement of data quality as a result of the use of such controls in Statistics Norway, and we have received valuable information from the respondents, while decreasing needs for validation of the data.

# 8. User testing:

We recommend that the draft questionnaire is tested by external users (real users).

#### 1.3 Sampling design and data collection

The sampling method applied usually by the PCBS is based on random sampling with a onestage sampling method, using a sample stratified by location (Gaza Strip and West Bank), economic activity and the employment size of the enterprise. According to the PCBS there is a total of 136.425 enterprises in Palestine (collected from the Census 2017) with 91,660 enterprises being located in the West Bank and 44,765 enterprises in Gaza Strip.

# Comments and suggestions:

Given any issues with over- or undercoverage (e.g. geographically or some industries may have only few units in the population) of populations in the targeted economic activities<sup>2</sup>, the employment groups, or similar, other sampling methods like e.g. multi-stage sampling or mixed stratified sampling might be considered useful alternatives. With those alternative approaches different extraction probabilities for the strata can also be assigned. Hence, a stratification of industry-groups along the main economic activities can then be taken into account.

In line with the European Statistics Code of Practice, we recommend to use data from administrative and other existing data sources whenever possible to avoid duplicating requests for data (response burden!); some data from businesses might already be available from their accounts or similar sources. This means that electronic methods should be used whenever possible in order to facilitate data transfers.

While adhering to confidentiality and data protection requirements, data sharing and data integration should be promoted in order to minimize response burden. The use of administrative data ensures that the data are of high quality (this might also stimulate the further use of the administrative data to compose indicators).

In order to ensure that the questionnaire is comprehensive and consistent even with many questions, we recommend developing electronic survey forms, e.g. web-surveys that also contribute to timeliness and cost effectiveness of the data collection process.

<sup>&</sup>lt;sup>2</sup> According to the UNCTAD manual recommendation that developing countries should cover all economic activities to provide base line indicators.

Considering that the last ICT survey conducted in Palestine was already 10 years ago, there might be information needs from the respondents which could be addressed through providing guidelines, workshops, video-tutorials, etc.

# 1.4 Methodology ICT in enterprises

Table 1: Comparisons between Eurostat and PCBS, methods for ICT-ENT.

Characteristic	Eurostat	PCBS
Statistical units	Enterprises <sup>3</sup>	Enterprises
Target population	Enterprises classified in	All operating enterprises in
	the following categories	Palestine.
	of NACE Rev. 2:	
	Section C	
	Section D, E	
	Section F	
	Section G	
	Section H	
	Section I	
	Section J	
	Section L	
	Section M	
	Section N	
	Group 95.1	
	Enterprises with 10 or	
	more persons employed	
	Enterprises located in any	
	part of the territory of the	
	country	
Periodicity	Yearly	2007, 2009, 2011.
Sampling design	Stratified sample is used in	Stratified, by region,
	almost every case, most	economic activity, number of
	often by NACE categories	employees
	and size bands.	
Survey vehicle	Participation is mandatory	Participation is voluntary
	in a large majority of	
	countries.	

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<sup>&</sup>lt;sup>3</sup> Definition: "The enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit."

Survey mode	Some sort of web/internet data collection is the most prevalent form.	CAPI using mobile applications with maps
RR	30 – 98% with a majority	84.9%
	between 60 and 100%	

Probably the most significant difference between the methodology of the Palestinian ICT ENT survey and the Eurostat ICT survey is the definition of the target population. While the target population in the European survey is rather restrictive (i.e. not all economic activity is part of the target population; only enterprises with 10 or more employees), the target population in the PCBS ICT survey seems to include all enterprises, irrespective of size or economic activity. One important issue in this regard is the response burden on small enterprises. Although the burden of the ICT ENT survey on enterprises is not specifically reported by Eurostat, it is recommended that the Palestinian Central Bureau of Statistics would estimate the burden of enterprises due to the questionnaire of the ICT ENT, both as actual burden in minutes, but also as subjective burden to the responding enterprises (e.g. organising the requested information, clarifying concepts, etc.).

Another issue with the different target populations for the Eurostat and the PCBS surveys is that comparisons between the two can only be made in specific cases where care has been taken to ensure the comparability, i.e. by using filters for enterprise size and economic activity in the micro data. The ordinary final results of the Palestinian ICT ENT survey cannot be compared with the same results from Eurostat or the countries in the ESS. However, it is recommended in the UNCTAD manual that developing countries should cover all economic activities to provide baseline indicators. Therefore the results from the Palestinian ICT ENT should be comparable to the results of the same survey from other countries basing their work on the UNCTAD manual.

It is important that the periodicity of the survey becomes more regular, preferably in a yearly rhythm, or at the very least that it is conducted once every two years. By providing users with repeated measures of the ICT use of enterprises, such information becomes a reliable basis to be used for policy actions and to estimate the impact of policy changes or implementations.

The application of nonresponse weights are highly recommended for the enterprise survey in order to reduce the possible nonresponse bias in the final estimators of the survey. Useful auxiliary data could be accessed from the sampling frame of the survey as it seems there is not much administrative data available for enterprises in Palestine.

# 1.5 Dissemination of the results

# Suggestions:

The data aggregates on the main economic activities may be reconsidered. Eurostat has an additional ICT-group consisting of the subgroups <u>NACE</u> 26.1-26.4, 26.8, 46.5, 58.2, 61, 62, 63.1 and 95.1.

Compose additional indicators by using the existing data. Please find the Eurostat transmission format for your inspiration in annex to this report.

#### 2. ICT in households

The main objective of the present part of the report is to review the ICT household indicators, as well as reviewing and updating existing methodologies in order to keep up with the evolution of technologies according to updated international recommendations. The second objective is to provide recommendations and guidelines for further development of the ICT household survey against the European model questionnaire for households.

#### 2.1 Review of the household survey questionnaire 2019

Up to now (2021), PCBS has conducted the household survey six times, in 2004, 2006, 2009, 2011, 2014, and finally in 2019. The main objective of the survey is to provide statistical data on household access to ICT in Palestine, and to study the penetration and purpose of private ICT use in Palestine.

The 2019 questionnaire consisted of identification data, quality controls and three main sections:

Section 1: Data on household members that include identification fields and socio-demographic information of the household members.

Section 2: Household data including information on the supervision of the use of computers and internet of children (5-17 years old) in the household.

Section 3: Data on individuals (10 years and above) regarding access to ICT equipment, access to the internet, computer use, and use of the internet.

# Comments and suggestions:

The questionnaire shares a lot of similarities with the Eurostat model questionnaire, as it covers many of the same modules and indicators, and the wording is in many cases similar to the Eurostat questionnaire. However, there are also some differences that we will highlight. Since the original ICT questionnaire used by the PCBS is in Arabic, it is not always clear if problems with some formulations only pertain to the English translation of the ICT questionnaire on

which the assessment was based. Wherever deemed appropriate, proposals for improvement will additionally be made.

In general, we recommend that the household questionnaire and the related questions are revised to reflect the current situation with regards to ICT and to eliminate any inconsistencies in the formulations.

One example is to use relevant wording when describing different technologies, such as the use of the notion "cloud" when asking about the storage of information on the internet.

When constructing the questionnaire and formulating items, PCBS should have a clear view of the information needs relating to each question. This makes it easier to formulate precise questions which ensure that you get the information you need. Precisely formulated questions also make it easier for the respondents to understand what the question is about, and make it easier to give precise answers, which will increase the data quality of the survey.

In addition to easily understandable and precisely formulated questions, the alternatives must also be precisely formulated, with clear definitions of what they entail. For instance, it should be clearly defined what the difference between a "mobile phone" and a "smart phone" is, and this definition should be standardized throughout the questionnaire in order to not confuse the respondents. This also touches on the previously mentioned point regarding inconsistencies in the questionnaire.

On the same note, it should be clarified if items mentioned in the questions are examples, or if the question is exclusively regarding those items. For instance, when asking about the use of storage space on the internet to save documents, pictures or music, it should be clear if these items are examples, or if the question is exclusively referring to the storage of exactly these items.

Based on a clear perception of the information need and a general revision of the questionnaire, PCBS should eliminate any redundancies in the questions and items. Redundant questions are questions that are irrelevant for the survey or that are repeated unnecessarily.

For instance, asking the respondent if they have an account at a bank (Question PR 18) is irrelevant for a survey about the use of ICT, especially if the use of internet banking has been asked about already earlier in the questionnaire (see question PR 08 / item 13). Hence, the

question on owning a bank account should be deleted, reducing the burden on the respondents, as well as increasing the data quality of the questionnaire.

Regarding the structuring of the questionnaire and its questions, we recommend that PCBS rearranges some questions in order to improve the flow and the logic in the questionnaire.

For instance, one suggestion in this regard is to rearrange the question regarding access to internet, so that the respondents are first asked if they have access to internet. If the answer is yes, then they can be asked for the source and type of internet, and finally to classify the source and type of internet by Palestinian or Israeli suppliers. A rearrangement of this kind can lead to easier and better data collection, and better data quality by improving the flow in the questionnaire and by minimizing errors caused by confusion or misinterpretation.

To ensure the quality of the data collected, we suggest that PCBS reduces the lengths of the reference periods of some questions, such as on the topic of eCommerce, from currently comprising a period of "the last 12 months" to a period covering "the last 3 months". We make this suggestion as it is easier for people to remember what they did or bought online in the last 3 months than in the last 12 months. Again, the reduction of the reference period to the last 3 months may contribute to an improvement in the quality of the data, as it makes the question easier to answer by the respondents, and the answers are likely to be more precise.

#### 2.2 Survey design: Potential additional modules

To further develop the survey and their indicators, we suggest that PCBS incorporates questions covering the topic of eGovernment, the topic of Internet safety and protective measures online, and questions covering the topic of the Internet of Things (IoT). As an orientation we suggest that the Eurostat questionnaire is used as a reference on how to incorporate these topics in the survey.

We suggest in addition that the PCBS incorporates questions from the Eurostat questionnaire regarding E-skills, in order to construct the ICT-skills indicator as an indication of the related ICT competences. In a similar way the inclusion of questions from the Eurostat model questionnaire on the topics of eCommerce and informatics threats should be considered.

For further details regarding the recommendations for the ICT household survey, see the Annex and related documents and files to this report.

# 2.3 Methodology ICT in households

In the discussions between the expert team and the Palestinian colleagues it was noted that the Palestinian Central Bureau of Statistics implemented the use of GSBPM to structure its statistical production process. We think that this is a good approach because it makes discussions such as the present much easier and more efficient.

Table 2: Comparisons between Eurostat and Palestine, methods for ICT-HH.

Characteristic	Eurostat	PCBS
Statistical units	Households	Households
	Individuals	Individuals
Target population	individuals: All individuals	Individuals: All individuals 10
	aged 16 to 74	years old or older
	All (private) households	Households: All private
	with at least one member	households in the state of
	aged 16 to 74.	Palestine.
Periodicity	Yearly from 2002	2004, 2006, 2009, 2011,
		2014, 2019
Survey vehicle	Mostly self-standing but in	Combined with the LFS and
	some cases combined with	other household surveys
	the LFS.	
Survey mode	Multiple modes are used in	Computer assisted face-to-
	most cases, usually with	face
	some combination of web	
	interviews and telephone interviews.	Voluntary participation.
	interviews.	
	Most often participation is	
	voluntary, although in	
	some countries it is	
	compulsory by law.	
Accuracy of the results	Based on calculations from	Percentage of Individuals (10
	Annex II of the IESS	Years and Over) Who Use the
	legislation	Internet cv%=1.3%
		Est.=70.6
		St.error =0.9
		Percentage of Individuals (10
		Years and Over) Who Use
		Internet and Purchased Goods or Services Online
		or Services Online Est.=6.8
		St.=6.8
RR	Ranges from 40 – 94% for	West Bank=77.6%
IN	households in 2020. Most	Gaza=92.7%
	are between 50 – 70.	Su2u-72.170
	are between 50 70.	

As can be seen from the comparisons in Table 2, many of the elements of Eurostat's ICT-HH survey and the survey being conducted in Palestine are quite similar. Both the statistical units and the target populations are similar although the age groups for individuals are more inclusive in Palestine compared to the ones used by Eurostat. This results in a higher coverage of the

population in Palestine and also opens the possibility of asking questions about children's use of the internet as well as on the influence of internet use on their health and well-being. Those topics are also mentioned in the OECD 2019 report "Measuring the Digital Transformation" and hence, allow for international comparisons. The OECD report also encourages countries to measure the digital transformation's impact on social goals and people's well-being, including the impact of using ICT by children. Therefore, there is some merit to increasing the age limits of the survey above the ones mentioned by Eurostat.

A more structured periodicity in the collection of data and the publication of results in Palestine is highly recommended. As mentioned before, a yearly ICT survey of households is probably the best option. However, to run the survey at least every two years would be a good first step. As is generally the case, the more points in a time series there are, the more relevant the figures are for its users.

According to the results of the 2019 ICT HH survey in Palestine, the accuracy of the results appears to be in line with the accuracy requirements (i.e. sample size) made by Eurostat in the new IESS frame regulation on social statistics in the European Statistical System. This suggests that the sample size and estimation procedure of the Palestinian Central Bureau of Statistics is efficient enough to provide users with figures of sufficient quality.

The response rates of the survey in Palestine is comparable to the highest response rates throughout the ESS. A response rate of 92.7% in Gaza is something that makes most statistical agencies envious. However, it is highly recommended that specific nonresponse weight should be developed and implemented in the processing of the data. If such weights are not used, the assumption is being made that the unit nonresponse of the survey is completely random, which in most cases is not the case. Therefore, it is important to make the necessary adjustments in order to correct for the possible nonresponse bias in the final estimates.

In order to increase the timeliness of statistics on the use of individuals and households of ICT it might be beneficial to implement more automated procedures for processing the data. As the PCBS colleagues indicated during the online mission, currently SPSS is the statistical software being used for the ICT HH survey. A future suggestion might be to assess if other suitable software solutions could be implemented. For example, the statistical package R is useful for

increasing the automaticity of processing statistical data while also offering a sustainable software solution. In addition, it is an open source software with a large and active user community and has far more processing and analytical possibilities than are possible with SPSS, for example for data validation where specific packages have been developed and distributed especially for those tasks.

According to the PCBS colleagues there are currently plans afoot to start a Household Budget Survey (HBS) in Palestine. The question then, is which questionnaire items about ICT related matters should be asked in the ICT-HH survey and which should be asked in the HBS. The main rule could be is that all items on purchases of ICT equipment as well as the cost for subscriptions should be a part of the HBS. While items on the use of ICT equipment should be asked in the ICT-HH. This however, implies thorough coordination of the related units in the PCBS when setting-up the surveys. Additionally, it has proven to be very valuable for NSIs to make agreements with telecommunications companies in their area in order to get data on subscription costs directly from the provider, with a written permission from the participating household. This has proven to reduce response burden as well as providing a higher data quality.

# 2.4 The "Digital Economy and Society Index" (DESI)

One goal of the ICT sector review mission which was also raised in the respective terms of reference, was to review the indicators of the Palestinian ICT sector and recommend to the Palestinian Central Bureau of Statistics suitable statistical ICT indicators. Hence, one recommendation in this regard is to implement the *Digital Economy and Society Index* (DESI) for Palestine.

DESI indicators have traditionally been estimated for European countries but the international DESI (called the DESI-I) is equally available, in which DESI is estimated for 45 countries, including 24 datasets for European countries. There are various data sources that can be used for DESI, with a household ICT survey and an enterprise ICT survey being the more important data sources, as well as administrative data from telecommunication administration bodies in each country. With regards to the human capital dimension in DESI, the labour force survey is an important data source.

The DESI is split into five dimensions:

- 1) Connectivity,
- 2) Human Capital;
- 3) Use of Internet Services;
- 4) Integration of Digital Technology;
- 5) Digital Public Services.

A special note should be taken of dimension two, as it entails an estimate of the ICT skill level of the population, which is an important indicator to measure and follow. One of the specific issues raised by the Palestinian Central Bureau of Statistics was how to estimate ICT skills for the population. The human capital of the DESI is a good estimator of that which is based on the ICT-HH survey as well as information from the LFS. Since both surveys are conducted in Palestine, it is recommended to use the DESI methodology to estimate ICT skill level of the Palestinian population.

In the long run, it is recommended that the PCBS should check on the possibility to initiate contact with the EU Directorate-General for "Communications Networks, Content and Technology" in order to be included in future compilations of the DECI-I.

By being a part of the DESI-I, Palestine would be a part of a harmonized indicator, based on high quality data and thus be in the situation of having comparable indicators to other countries involved in the DESI-I. That would be an important source of information for evidence-based policy-making with regards to ICT in Palestine and a way to measure the effect of policy changes or other factors that can influence the ICT sector.

# **Summary**

The present report summarises the findings of an EFTA expert panel based on a detailed review of the enterprise and household surveys conducted by PCBS. The reviews have been complemented with exchanges of views conveyed during three online meetings with the PCBS colleagues in charge of the ICT in enterprises and households surveys on 10, 11 and 26 May 2021.

The respective ICT questionnaires of PCBS have been compared to the European model questionnaires and the main differences have been pointed out by the experts. If considered appropriate, proposes for changes were made while explaining the reasoning that led to the suggestions.

The main suggestions included such proposals as:

- Rearranging the order of questions and/or items in order to optimize the logic and the flow of answers;
- Reformulating questions and/or items in order to increase their intelligibility by respondents;
- Reduce response burden by also checking on alternative (administrative or private) data sources already available;
- Considering automated data retrieval and analysis methods in order to increase data quality;
- Increase the periodicity of the ICT surveys so that they are conducted at least every second year;
- Add various modules that allow for deepened analysis on the ICT situation in enterprises and households.

Even though the expert panel jointly concluded that there are possibilities for improvement, the current ICT surveys seem by and large to correspond to international (ESS) standards and methodologies.