**“Information and Communication Technology Satellite Account Exercise - Opportunities and Risk from Alternative Methods”**

**Case Study: Palestine**

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**Abstract**

The importance of the Information and Communication Technology (ICT) sector in the Palestinian economy and the global economy arose from the fact that it involves in many economic activities such as manufacturing, trade (whole sale and retail), telecommunication services and media.

The urgent need to study Information and Communication Technology satellite accounts (ICTSA) appeared recently due to the rapid global development in the field of information and communication technology, which led to the development in the culture and civilization of the community and thus raising the level of science and knowledge.

The advantage of a satellite account is the ability to isolate the ICT supply and demand in various industries, it allows the component of supply and use tables (SUT) to be examined with greater flexibility than the frame work of the national accounts typically allows.[1]

So gaining data about its impact on economy in terms of expenditure and production is necessary, which in turn serves decision makers, researchers, and those interested in the development of the information sector.

It worth's mentioning that ICTSA in Palestinian Central Bureau of Statistics (PCBS) is still in the study phase and not published yet.

**Key Words**

PCBS, data sources, SUT, OECD.

1. **Introduction**

As the primary provider of official statistics for Palestine, PCBS is striving to implement the Palestinian Information and Communication Technology Satellite Account (ICTSA) to provide accurate and reliable indicators on the status of ICT expenditure in Palestine to ensure the credibility of official statistics and to serve decision makers, researchers, and those interested in the development of the information and communication sector. The absence of recommended guidelines and framework about ICTSA consider as a fundamental obstacle that had appeared, so depending on the recommendations of the Organization for Economic Co-operation and Development (OECD), experiences of other countries and the System of National Accounts (SNA, 2008) were adopted.

1. **Information and Communication Technology Satellite Account Methodology:**
* The aim of this exercise is to isolate ICT activities in the supply- use table of which form the basis of ICTSA. Total Supply in economy consists of total output and import of goods and services, while total Use in economy consists of intermediate consumption, final consumption expenditure, gross fixed capital formation (GFCF) in addition to export of goods and services. But due to the lack of available data about ICT from financial, governmental, and Nonprofit Institution Serving Household (NPISH) sectors, ICTSA as a studying experience in PCBS is implemented only for the non-financial and the household sectors for the year 2017.
* Referring to the recommendations, definitions, and classifications of the OECD that form the basis of the recommended ICT products (goods and services) and activities, these products and activities are classified according to Central Product Classification (CPC) and International Standard Industrial Classification of All Economic Activities (ISIC, Rev.4). In PCBS economic surveys, ICT activities and related activities are classified according to the (ISIC, Rev.4).
* Imports and export data are traditionally classified according to Harmonized System (HS). Data for ICT products had been chosen according to the product classification as described in CPC.
* Data are available for these indicators of ICT activities:
* Output**.**
* Intermediate consumption.
* Valueadded.
* Compensation of employees.
* Imports and exports of ICT goods and services.
* Household final consumption (HFC).
* Gross fixed capital formation (GFCF)
* Gross Domestic Product (GDP) based on production approach (also known as value added approach) is the summation of value added, that is total differences between gross output value of resident producing unit (measured at producer price) and value of intermediate consumption (measured at purchaser’s price).

**Data of these indicators is considered as a strong and reliable for ICT goods, while it’s weak for ICT services due to these reasons:**

1. Import and export ICT services data for the year 2017are preliminary estimates taken from balance of payment.
2. Data for household expenditure for ICT goods and services in Palestine are preliminary data.
3. Data of informal ICT sector are not covered in PCBS surveys.
* ICT specific industries with available ISIC Rev.4 codes are as in the table below:

|  |  |
| --- | --- |
| **ICT Specific Activity** | **ISIC Rev.4**  |
|  ICT manufacturing  | 2610 |
| Telecommunication services | 6110,6120,6130,6190 |
| Computer programming, consultancy and related activities  | 6201,6202,6209 |
| Data processing, hosting and related activities, web portals | 6311,6312 |
| Content and media | 5811,5812,5813,5819,5911,5912,5920,6010,6020 |
| **ICT Related Activity** |  |
| ICT trade (Whole sale and retail) | 4651,4652,4741,4742 |
| Repair of computers and communication equipment | 9511,9512 |

**Table (1): ICT Economic Activity with Compatible ISIC Rev.4 code according to OECD recommendations [2]**

**2.1 Primary Data Sources**

ICT satellite accounts rely on many data sources and variety of data collection and compilation methods in order to cover the recommended sectors. The total data sources are as follows:

* Import and export data are from administrative records through coordination between institutions in order to build a partnership to enhance the value of official statistics.
* Main economic indicators are from economic surveys series that implemented annually by PCBS.
* HFC are from household expenditure and consumption survey for the year 2017.
* Census 2017.

**3. Main Result**

**3.1 Import and Export of ICT products**

Import and export data for ICT products are from administrative records, it measures the trade transaction volume between Palestine and the whole world including Israel, in the other hand, data for ICT import and export services are estimated values for the year 2017. Palestine imported a total of USD 262 million of ICT products and services which constitute 4.5% of the total imports of Palestine, while exported of ICT products and services was USD 60 million which constitute 5.6% of total export. ICT trade deficit was USD 200 million in 2017 as in the figure below:

**Fig (1): Import, Export and Trade Deficit of ICT products and services in Palestine\*, 2017[3]**

\* Data excluded those parts of Jerusalem which were annexed by Israeli Occupation in 1967.

**3.2 Main Economic Indicators for ICT activities**

Economic surveys series implemented annually by PCBS for the enterprises of the private sector. The results of economic surveys show the data of the main economic indicators of ICT specific and related activities for the year 2017 were as in the table below:

|  |
| --- |
| **Table 2:** **Main Economic Indicators for ICT Specific and Related Activities in Palestine\*, 2017 [4]** |
| **(Value in 1000 USD)** |
| **ICT Specific Activity** | **Out put** | **Intermediate Consumption** | **Compensation of Employees**  | **Value Added** | **GFCF** |
|  **ICT manufacturing**  | 11,829 | 6,766 | 1,078 | 5,063 | 0 |
| **Telecommunication services** | 585,564 | 120,330 | 115,081 | 465,233 | 96,629 |
| **Computer programming, consultancy and related activities**  | 36,703 | 2,942 | 13,813 | 33,761 | 417 |
| **Data processing, hosting and related activities, web portals** | 3,071 | 450 | 1,407 | 2,621 | 0 |
| **Content and media** | 21,357 | 5,593 | 13,230 | 15,764 | 377 |
| **ICT trade (Whole sale and retail)** | 89,907 | 19,949 | 873 | 69,958 | 16,655 |
| **Repair of computers and communication equipment** | 13,801 | 4,274 | 2,751 | 9,527 | 0 |
| **Total**  | **762,232** |

|  |
| --- |
| **160,304** |
|

 | **148,233** | **601,927** | **114,078** |

\*Data excluded those parts of Jerusalem which were annexed by Israeli Occupation in 1967.

* Total ICT output of the ICT sector at current prices was USD 762 million in 2017, telecommunication services constitute 77% of the total ICT output.
* Total value added for ICT specific and related activities for the year 2017 was USD 602 million, it constitutes 4.2 of the total GDP at the current prices, in which GDP at current prices for the year 2017 in Palestine was USD14,498.1 million.
* Total ICT expenditure (Computer consulting services, and Advertising, and Post, telegraph, telephone and fax+ Internet subscription) for enterprises in non financial sector was USD 145 million, which constitute 3.1% of total intermediate consumption and 19% of total ICT output. ICT intermediate consumption, and intermediate consumption and share of ICT intermediate consumption for enterprises in all economic activities for the year 2017 were as in the table below:

**Table 3:** **Total ICT Intermediate Consumption in All Economic Activities in Palestine\*, 2017[4]**

|  |  |  |
| --- | --- | --- |
|  | **(Value in USD 1000)** |  |
| **Economic Activities** | **Used ISIC Division**  | **Intermediate Consumption**  | **ICT Intermediate Consumption** | **Share of ICT Intermediate Consumption (%)** |
| **Industry**  | 05-39 | 2,805,932 | 23,075 | 0.8 |
| **Construction**  | 41-43 | 348,890 | 2,737 | 0.8 |
| **Trade**  | 45-47 | 736,877 | 49,537 | 6.7 |
| **Transport and Storage**  | 49-53 | 76,784 | 2,922 | 3.8 |
| **Communication and Information**  | 58-63 | 130,065 | 36,044 | 27.7 |
| **Services**  | (55-56), (68-96) | 581,332 | 31,051 | 5.3 |
| **Total**  |  | **4,679,880** | **145,366** | **45.2** |

\* Data excluded those parts of Jerusalem which were annexed by Israeli Occupation in 1967.

**3.3 House Hold Final Consumption on ICT products and services in Palestine:**

In 2017, preliminary data show that the household final consumption on ICT products and services was USD million 618.9 in Palestine (excluded those parts of Jerusalem which were annexed by Israeli Occupation in 1967) [5].

**4. Constraints and Risk**

The main constraints and risk associated with ICT satellite accounts in Palestine are:

* No recommended guidelines and framework.
* Lack of administrative records about governmental and NPISH sectors.
* Difficulties in estimating output from household ICT services (informal sector).
* Obstacles in estimating data especially that associated with e-commerce.

**5. Recommendations**

* Get benefit from the experiences of other countries in ICTSA due to the lack of updated published reports.
* Improvement of data within ICT framework with ensuring the quality.
* Obtaining data for the expenditure of ICT from governmental, NPISH and financial sectors in order to compile ICTSA for Palestine for the year 2017.
* Further investigation and more details about labor/employment, and productivity in the ICT specific and related activities.
1. **References**

**[1] Information and Communication Technology satellite account for South Africa, 2012.** Report No: 04-07-01, March 2015.

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**[5] Palestinian Central Bureau of Statistics, 2018. Main Finding of Living Standards in Palestine (Expenditure, Consumption and Poverty), 2017. Ramallah – Palestine.**