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**Setting Priorities and Defining Criteria  
for Developing New SPPIs in Israel**

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## 1. Introduction

In recent years, the Israeli economy has been evolving from an economy with a production bias to one that is based on the service industries, while the industrial, agricultural, and commercial sectors have been shrinking. This is a deep structural change that is typical of modern economies.

However, while more than 40 industries are defined as service industries, only seven<sup>1</sup> of them are measured in Israel. In view of the lack of appropriate indices, the calculation of the output at constant prices in the trade and service sectors is a problematic task. Therefore, in August 2022, a work plan for developing new Producer Price Indices for Services (SPPIs) and updating the existing ones was prepared by the Israel Central Bureau of Statistics (ICBS). Implementation of this plan will make it possible to improve the statistical series in the fields of National Accounts.

## 2. Order of priority in developing SPPIs

As can be seen from Figure 1, the data<sup>2</sup> on revenue distribution by economic sectors for 2021 show that revenue in the trade and service industries constitutes 63.9% of the total revenue in the economy (not including diamonds), with the revenue from the trade sector accounting for 28.0%, and services accounting for 35.9%. This, as compared to manufacturing, which accounts for 18.8%; and construction, agriculture, electricity and water supply, which together account for 17.3% of the income of all economic sectors in the Israeli economy.

Figure 2 illustrates the changes in the revenue shares over the last decade. Since some of the industries were affected by the Coronavirus (COVID-19) crisis, the figure also

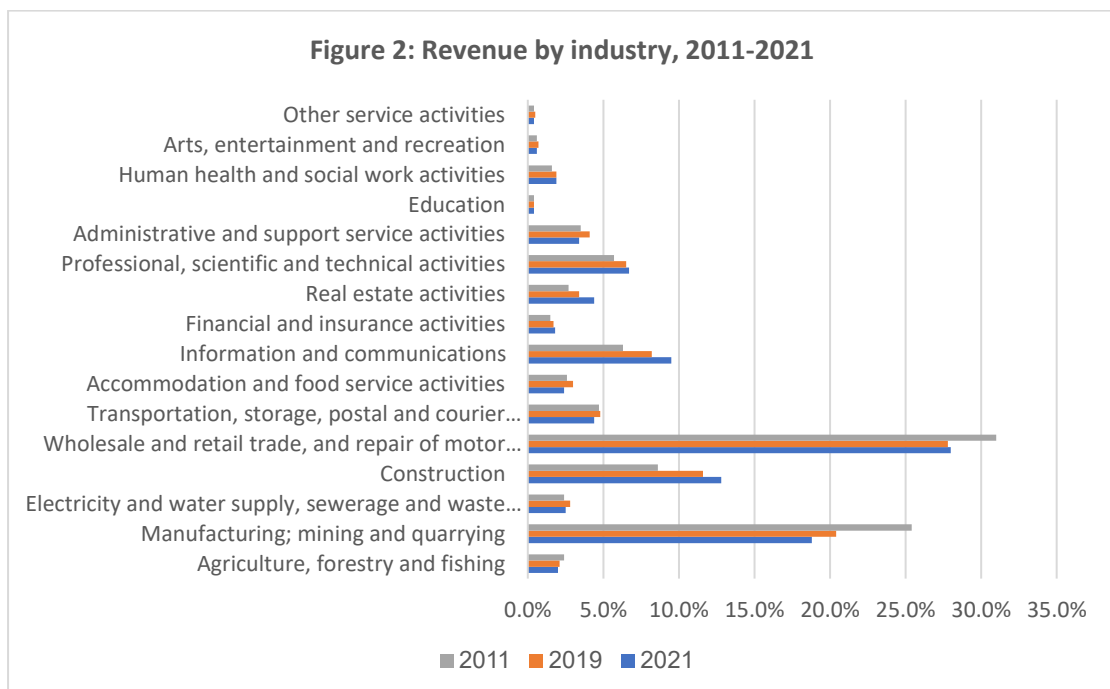
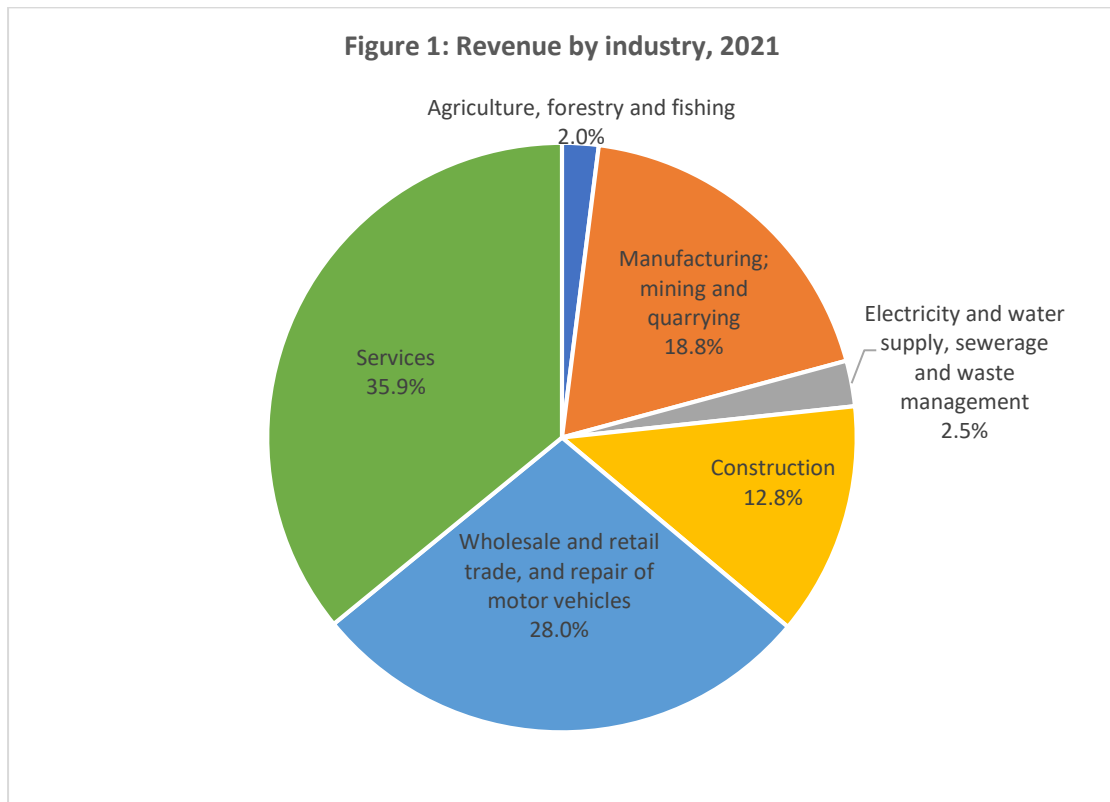
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<sup>1</sup> There is a disagreement concerning the precise number (7 or 8) of the measured industries because of the different definitions. On the one hand, Legal and accounting activities are included in one division (69), according to *the International Standard Industrial Classification of All Economic Activities* (ISIC 4); on the other hand, these are two separate and distinct industries.

<sup>2</sup> Data source for Figures 1-2: Israel Central Bureau of Statistics. *Dealers and Revenue in the Total Economy According to Value Added Tax, 2009–2011* and *Dealers and Revenue in the Total Economy According to Value Added Tax, 2019–2021*.  
<https://www.cbs.gov.il/en/pages/search/SearchResultsMain.aspx?k=Dealers%20and%20Revenue%20in%20the%20Total%20Economy%20>

These publications are based on samples of VAT reports and include annual data in absolute numbers.

includes data for 2019, a year before the crisis. The figure reveals that over the period 2011–2021, there was an increase in the share of the service industries in total revenue (especially, in Information and communications; Professional, scientific and technical activities; and Real estate activities). At the same time, there was a decrease in the revenue shares of Agriculture, Manufacturing, and Wholesale and retail trade.



As mentioned above, there are many service industries that are not presently measured in Israel. Due to resource constraints, it is not possible to develop all of them concurrently. There is, therefore, a need to set priorities and define criteria for ranking the importance of the industries.

Below, are the criteria that we have defined for ranking the importance of the developing price indices of service industries:

1. Contribution to GDP:

The greater the relative weight of the industry, the higher the priority.

2. The need to have accurate deflators for National Accounts:

The level of necessity for National Accounts is determined by two factors:

A) The rate of intermediate uses/gross fixed capital formation/exports versus private consumption –

The data for various uses can be found in input-output tables. The rationale behind this is that if the rate of private consumption within the industry is high, the consumer price index can be used as a deflator index. For the purpose of the current work plan, three levels of necessity have been set:

1 - high level (intermediate uses/export of goods of over 70%), 2 - medium level (intermediate uses/export of goods in the range of 50–69%), 3 - low level (intermediate uses/export of goods of less than 50%).

B) The deflator that is presently used in National Accounts –

A high level of necessity is given to industries that use a general consumer price index since no suitable index has been found for that industry. This is due to the fact that if the rate of private consumption within the industry is not high, the consumer price index does not reflect the change in the industry and causes a bias.

3. The level of complexity of the industry according to the difficulty in developing price indices:

The greater the experience in developing the price index and the richer the professional literature on the subject, the less complex the developing of the index will be. In addition, there are industries that are complicated to measure, such as wholesale trade, computer programming, and R&D (research and development), despite the existing methodology.

### 3. Selected industries

The service industries that are already included in the computation of the Producer Price Indices (PPIs) are the following:

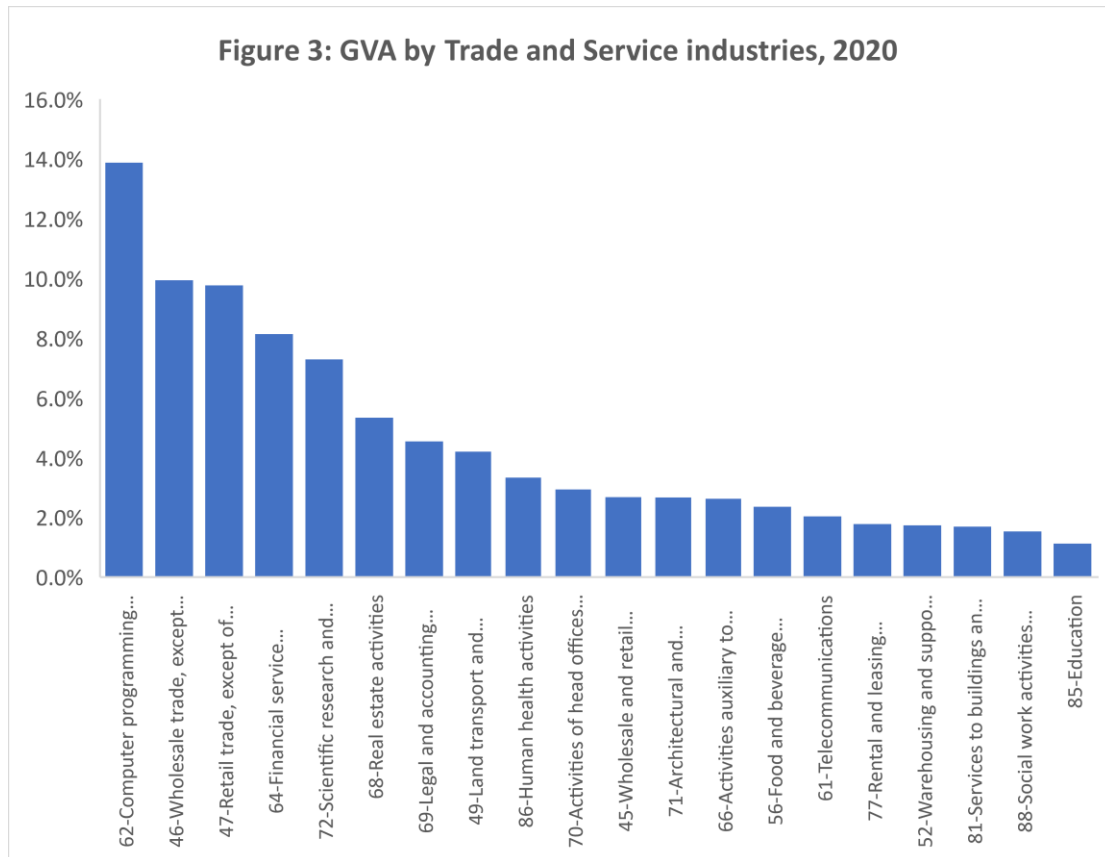
1. Division 58 - Publishing activities
2. Division 69 - Legal and accounting activities:
  - 691 Legal activities
  - 692 Accounting, bookkeeping and auditing activities; tax consultancy
3. Division 70 - Activities of head offices; management consultancy activities:
  - 702 Management consultancy activities
4. Division 73 - Advertising and market research
5. Division 78 - Employment activities
6. Division 80 - Security and investigation activities
7. Division 81 - Services to buildings and landscape activities:
  - 812 Cleaning activities

The order of priority of the service industries which are not yet measured in Israel was determined based on the following data:

1. The weight of the industry in the total trade and services sector, according to the gross value added (GVA). Figure 3 shows the data for the 20 largest industries, based on the Survey of Industries for 2020<sup>3</sup>.
2. The level of necessity, according to the rates of use in the input-output and supply-use tables, as of 2014.
3. The measure used in National Accounts today as a deflator.
4. The list of countries that have already developed an index for the industry. The assumption is that the greater the number of countries, the less complex the process of developing the index. It should be noted, however, that not only the number of countries is important, but also the quality of the methodology published by those countries.

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<sup>3</sup> At the time of preparation of the work plan, the most up-to-date data available were for 2018. The Survey of Industries was based on a sample drawn for all industries from the Business Register of the Israel Central Bureau of Statistics. The detailed results are available at: <https://www.cbs.gov.il/en/publications/Pages/2021/industries18-e.aspx>  
For the purpose of this paper, and for Figure 3 in particular, the data updated for 2020 were used.



Following, are the details of the top five industries that have been selected<sup>4</sup> for developing, according to the *International Standard Industrial Classification of All Economic Activities, Revision 4 (ISIC 4)*.

1. Computer programming, consultancy and related activities

Section J - Information and communication

Division: 62

Reasons for selection:

- a. The largest industry in trade and services, with a weight of 13% in 2018 (13.9% in 2020);
- b. High level of necessity due to the high rates of export, investment, and intermediate uses;

<sup>4</sup> Some of the industries, such as Water supply; sewerage, waste management and remediation activities (Section E) and Wholesale and retail trade; repair of motor vehicles and motorcycles (Section G), as well as Scientific research and development (Division 72), were excluded from the initial list due to the complexity of the industry and difficulty in measuring.

- c. There have been attempts to develop an index in the past, which were curtailed due to the COVID-19 crisis;
- d. Developed and measured by many countries despite the high level of complexity of the industry from a measurement perspective.

## 2. Real estate activities

### Section L - Real estate activities

Division: 68

Reasons for selection:

- a. The fifth industry in trade and services, with a weight of 6% in 2018 (5.3% in 2020);
- b. High level of necessity due to the high rate of intermediate uses (88%);
- c. A need raised by the Bank of Israel.

## 3. Architectural and engineering activities; technical testing and analysis

### Section M - Professional, scientific and technical activities

Division: 71

Reasons for selection:

- a. High level of necessity due to the high rates of export, investment, and intermediate uses;
- b. There have been attempts to develop an index in the past, which were curtailed due to resource constraints.

## 4. Land transport and transport via pipelines

### Section H - Transportation and storage

Division: 49

Reasons for selection:

- a. The seventh industry in trade and services, with a weight of 4.3% in 2018 (4.2% in 2020);
- b. High level of necessity, particularly for the following classes:  
4923 Freight transport by road,

- 4924 Transporting passengers for trips and special trips on buses<sup>5</sup>,
- 4930 Transport via pipeline;
- c. A need raised by National Accounts;
- d. Developed and measured in many countries.

#### 5. Financial service activities, except insurance and pension funding

##### Section K - Financial and insurance activities

Division: 64

Reasons for selection:

- a. The fourth industry in trade and services, with a weight of 8.3% in 2018 (8.1% in 2020);
- b. A need raised by National Accounts, despite the medium level of necessity, according to the definition mentioned above, and the complexity of the industry due to the relatively small number of countries which have developed and measure the index.

#### **4. Implementation of the plan**

The work plan is divided into two parallel tasks: updating existing indices and developing indices for new industries. The task of updating is dealt with in a separate paper, presented as a part of the session *Reoptimizing/Updating Samples for PPI Including Initial Recruitment of Reporting Companies*. The part of the work plan dealing with the second task is based primarily on the timetable proposed in the Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services (2014, p.71), and consists of the following steps:

1. Search of methodology and literature research;
2. Collection of data on size and structure of the industry, identification of industry representative organisations;
3. Discussion with representative organisations (incl. consulting companies) and with users of statistics (incl. different departments in the ICBS);
4. Pilot sample (based on the Trade and Service survey) .

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<sup>5</sup> This class does not appear in the ISIC. It has been developed and adapted specifically for Israel.



5. Pilot questionnaires;
6. Visits to enterprises;
7. Drawing of representative sample (with assistance of Statistical Methodology Department, ICBS);
8. Finalisation of questionnaires;
9. Dispatch of questionnaires;
10. Data collection;
11. Evaluation of data quality;
12. Computation and publication of index.

As previously mentioned, the Computer programming, consultancy and related activities industry was given first priority. The development of the index for this industry has already begun, details of which can be found in a separate paper, presented as a part of the session on mobile games.

## **Conclusion**

Structural changes in the Israeli economy require adaptation of the measures, including PPIs. An increase in the share of services in the GDP raises the need for developing new PPIs. However, resource constraints do not allow concurrent developing of indices for all relevant industries. Thus, there is a necessity to define criteria for setting priorities.

This paper describes the process of the setting of priorities for developing new SPPIs. Since a vital use of PPIs is as deflators of volumes underlying the nominal values, which are not directly measurable, the main criterion for selection was the necessity for National Accounts. Nevertheless, it is worth noting that there are some industries that, despite the requests by National Accounts, were not included in the list of potential development due to the complexity from a measurement perspective and/or lack of relevant methodology. The most notable example is R&D. On the other hand, the Computer programming, consultancy and related activities industry was given first priority due to its contribution to the GDP, despite the measurement difficulties.

## References

1. OECD/Eurostat. (2014). *Eurostat-OECD Methodological Guide for Developing Producer Price Indices for Services: Second Edition*, OECD Publishing.
2. United Nations. (2008). *International Standard Industrial Classification of All Economic Activities (ISIC), Rev. 4*. Statistical Papers Series M. No. 4/ Rev. 4.