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TOWARDS A THEMATIC ACCOUNT OF THE SPACE ECONOMY IN ITALY METHODOLOGY AND FIRST EVIDENCES

MEASURING THE SPACE ECONOMY: GOALS AND CHALLENGES

Outline

Relevance of the Space Economy

Measuring the Space Economy

The Thematic Account of the Space Economy



Relevance of the space economy



Global - according to OECD

+100%

Increase in number of objects launched in 2013 compared with the average of previous years

6,700

Operational satellites in orbit at end-2022, twice the number recorded by the end of 2020

1,000+

Operational Earth-observation satellites

Italy - according to OECD

1964 First satellite in orbit (San Marco 1)

22 Satellites currently in orbit

Spaceport under development

0.069% Institutional space budget (% of GDP)

23.6 USD Institutional space budget per capita



Relevance of the space economy

- The global growth in satellites launches and investments in space-related infrastructure has been associated with:
 - > an increase in the economic weight of the industry
 - > a rising demand for satellite-based services and data
 - > the integration of space-enabled inputs into an expanding range of goods and services
- o Italy plays a significant role in this context:
 - > third-largest contributor to the budget of the European Space Agency
 - > solid industrial capabilities supported by a comprehensive supply chain
 - > a dynamic scientific community
- The rising relevance of space-related activities has created the need to measure the space economy both nationally and globally



Measuring the space economy | Worldwide overview

USA

142 USD bn GVA

0.5% of GDP

373k Workers

Canada

2.5 USD bn GVA

0.2% of GDP

14k Workers

India

8.4 USD bn GVA

0.2% of GDP

96k Workers

Japan

26 USD bn GVA

0.6% of GDP

In Europe, only Italy, Latvia and Denmark provide estimates of the contribution of the space economy according to Eurostat–ESA guidelines.



Measuring the space economy | Goals and challenges

Italy is piloting the guidelines developed by Eurostat–ESA, in collaboration with OECD, the US BEA and the EC JRC, to produce high-quality, comparable and integrated estimates of the space economy in Europe

Goals

- Identify space activities within the national economic system
- Measure the contribution of space activities to the Italian economy
- Analyse the structural characteristics of space firms (size, productivity, specialisations)
- Compile a space thematic account, aligned with international statistical standards

Challenges

- Resolving ambiguities in mixed-production industries (e.g., distinguishing space within aerospace manufacturing)
- Developing the matrix structure of the thematic account
- ➤ Extending input-output tables to capture the interrelationships between the space economy and the rest of the economy



The thematic account of the space economy

- Measuring the components of the economy that cannot be directly identified and analysed through the customary breakdowns used to compile and publish National Accounts is considered one of the major challenges for official statistics
- The thematic extension of the National Accounts framework is acknowledged as the most effective tool for mapping, analysing, and monitoring complex and cross-cutting economic phenomena
- Their relevance has been further stressed in the 2025 update of the United Nations' System of National Accounts manual, which will be adopted in the upcoming revision of Eurostat's European System of Accounts.
- Istat currently publishes thematic accounts on a wide range of topics, from Health to Tourism, from Environment to Social Protection. Other thematic accounts, such as those relating to Sport, Social Economy, and the extension of Input-Output Tables by firms' characteristics, are being developed



The thematic account of the space economy

The compilation of the thematic account of the space economy is carried out through a two-step process:

Microfoundation



- Identification of space activities
- Measurement of their contribution to the national economy
- Analysis of the performance and structural characteristics of space firms

Extension of Input-Output tables



- Structured representation of the space economy within the national production system
- Impact analysis: direct, indirect and induced effects
- Integration into Eurostat inter-country inputoutput tables



The thematic account of the space economy

In the last two years, the **microfoundation step** has been completed by developing a methodology to identify space activities and producing the results that will be presented today.

The microfoundation represents the **core** of the thematic account. It provides:

Definitions of the scope of the space economy and relevant classifications

Identification of space firms by algorithms and profiling techniques

Measurement of relevant National Accounts items

Definition of contribution to the economy and features of space firms along several dimensions of analysis



Coming soon

The extension of input-output tables for the space economy will be compiled for the reference year 2024, also exploiting:

- data from the Permanent Census of Enterprises in which Istat included a specific question aimed at identifying space firms
- further development of the ASI space-firm database

The aim is to compile the thematic account of the space economy every three years, in order to monitor this relevant component of the economy and provide sound statistical information for stakeholders and policymakers



Thank you

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