

General Information

Research and Development (R&D) is classified in four main sectors:

- *Government Sector (GOV)* - includes all Government Ministries and Departments, offices and other bodies which furnish, but normally do not sell to the community, those services, other than higher education, which cannot otherwise be conveniently and economically provided, as well as those that administer the state and the economic and social policy of the community.
- *Business Enterprise Sector (BES)* - includes all firms, organisations and institutions whose primary activity is the market production of goods and services (other than higher education) for sale to the general public at economically significant prices.
- *Higher Education Sector (HES)* - includes all universities, colleges of technology and other institutions of postsecondary education, whatever their source of finance or legal status.
- *Private Non-Profit Sector (PNP)* - includes non-market, private non-profit institutions serving households and private individuals or households. This sector is not captured as it is considered to be negligible.

Business Innovation

It is a census survey that covers a number of sectors and is targeted to the 10+ population. It collects information on different types of Innovation including the products, processes, organisational and marketing.

Data Collection

For the Business Sectors, every year in July, a questionnaire is sent to Enterprises that are known or likely to have R&D. The population is updated yearly using a number of sources, lists of enterprises participating to initiatives covered both by MCST and Malta Enterprise and enterprises that replied positively to an R&D question in the Innovation Survey. The Innovation Survey is carried out also by the BR unit and it is carried out every two years, following the European methodology. This is mailed also in July. Final data for both the business R&D and Innovation survey is available at t+18 months, whereas provisional data for the R&D is at t+10.

For the Government and Higher Education Sectors, every year in February, a questionnaire is sent out to all Government Ministries, Department, Extra Budgetary Units and Local Councils to collect data on any Research and Development activity carried out by the

respective entity. In year t, final data is collected for t-2 years and provisional data for t-1 year. Hence, in February 2016, a questionnaire was sent requesting final data for 2014 and provisional data for 2015. Final data for 2015 will be collected in February 2017, resulting in data for a given year to be collected twice.

Administrative data is also used for indicators which are not available through the questionnaire. This data involves:

National R&I Programme: This is provided by MCST (Malta Council for Science and Technology) and it involves public funding passed on to public and private organisations for R&D projects. Data is split by beneficiary, from which, the amount of public funds passed on to the private beneficiaries is extracted and included in GBAORD (Government Budget Appropriations of R&D) data.

EUREKA: This data is provided by Malta Enterprise and involves the total expenditure on EUREKA projects. Since EUREKA projects fall under the definition of Transnational Coordinated Research this data is used to determine the amount of Transnational Coordinated Research conducted by Maltese entities.

Data Dissemination

Eurostat

In June, the first set of transmission tables are received by Eurostat to be transmitted by the end of the month. These tables cover 4 sectors, the Business Enterprise Sector (BES), The Government Sector (GOV), the Higher Education Sector (HES) and Private Non-Profit Sector (PNP). In Malta, the PNP sector is not captured as it is considered to be negligible.

In 2015, the transmission tables included compulsory data for the years 2011-2013 and voluntary provisional data for 2014. Data for 2014 is provided for the GOV and HES sectors only, since for the BES sector data is not readily available by end of June.

The transmission programme for June includes the following data:

- Headcount and Full time equivalent personnel data by economic activity, sector of performance, gender, qualifications, major field of science and citizenship
- Expenditure data by sector of performance, source of funds, type of cost, type of R&D, major field of science, socio-economic objective and type of funds. BES data is also collected by NACE
- GBAORD data by socio-economic objective

In October, two indicators are re-transmitted for the 3 sectors;

- Full time equivalent personnel by sector of employment and occupation
- Gross Domestic Expenditure on R&D by sector of performance and source of funds

Additionally, data on Transnationally Coordinated Research is only collected by Eurostat in December together with a re-transmission of GBAORD data. In December 2015, both data sets were transmitted for 2010-2014.

After the June data collection, Eurostat updates its R&D and GBAORD quality reporting for that particular year. This exercise is conducted annually.

The Business Innovation Survey transmission is done every two years in June t+18
The following data is provided:

INN_BASIC1	Basic economic information on the enterprise for 2012
INN_BASIC2	Basic economic information on the enterprise for 2014
INN_EMPUD	Employees in 2014 with a tertiary degree
INN_GEN	General information about the enterprise
INN_GEN2	General information about the enterprise / Geographic areas with the largest market in terms of turnover between 2012 and 2014
INN_ENTER	Enterprises by main type of innovation
INN_TYPES	Enterprises by specific type of innovation
INN_DEVPDT	Enterprises by location of product development
INN_DEVPCS	Enterprises by location of process development
INN_EXPEND	Innovation activities and expenditures in product and/or process innovative enterprises (regardless of organisational and marketing innovation)
INN_DEVELOP_RD_NRD	Enterprises by location of innovation development (R&D and NON R&D performers) (R&D performers = In-house OR External R&D)
INN_FUNDING	Product and/or process innovative enterprises that received public funding (regardless of organisational and/or marketing innovative enterprises)
INN_IPR	Enterprises using intellectual property rights and licensing
INN_COOP	Co-operation arrangements on innovation activities in product and/or process innovative enterprises (regardless of organisational and/or marketing innovative enterprises)
INN_NONINNO	Non-innovative enterprises
INN_ORGMKT-type	Implementation of organisational or marketing innovations in product and/or process innovative enterprises
INN_PUBLINNO	Public sector procurement and innovation in the total of enterprises
INN_ENV	Enterprises that have introduced innovation with environmental benefits
INN_ECODRIVER	Drivers for innovation with environmental benefits and procedures to reduce the environmental impact

Local Dissemination: News Release and Malta in Figures

Locally, data is disseminated by means of a News Release and in the 'Malta in Figures' publication.

A News Release on R&D statistics, drawn up jointly by Units A2 and B4, illustrating government, higher education and business R&D, is published every year in July/August in the form of tables following the transmission to Eurostat. In every News Release, Unit A2 creates a set of methodological notes, including definitions on R&D, major fields of science, as well as definitions on the types of costs. A description of what constitutes the government sector is also indicated. The latest News Release was published by NSO on 14th July 2015. News Releases may be found at the following link:

http://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_A2/Public_Finance/Pages/Research-and-Development-in-Malta.aspx

The commentary in the News Release is divided into 3 parts; R&D expenditure, R&D employment, and GBAORD. All information in the commentary is taken from the tables illustrated in the release. The tables include the following:

1. Total R&D expenditure as a percent of GDP
2. Total expenditure on R&D by type of costs
3. Total expenditure on R&D by Major Field of Science
4. Source of Funds of R&F expenditure
5. Total employment in R&D by sex and occupation
6. R&D employment by major field of science
7. Government budget appropriations or outlays for Research and Development (GBAORD)

R&D data is also disseminated locally by means of the 'Malta in Figures' document publication whereby 2 two tables are displayed; one of them depicting the general government employment in R&D in headcount by full-time and part-time; and the other one illustrating the general government expenditure on R&D by type of expenditure.

Metadata reports (ESQRS) are also updated annually and uploaded on the NSO's Metadata website at the following link:

- <http://nso.gov.mt/metadata/reports.aspx?id=3>
- <http://nso.gov.mt/metadata/reports.aspx?id=26>

Business Innovation

A News Release is published after a survey is concluded

http://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_B4/Business_Registers/Pages/Business-Innovation.aspx

Metadata reports (ESQRS)

<http://nso.gov.mt/metadata/reports.aspx?id=25>

Collaboration with MCST

NSO is currently in collaboration with MCST for the possibility of new indicators to be collected through the questionnaires in connection with the Maltese National Research and Innovation Strategy.