

5 April, 9:40 - 10:00, Room 13.1

## R&D in Portuguese companies

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The purpose of this study is to characterize and evaluate the Research and Development (R&D) activities of Portuguese companies, from 2016 to 2022. This is a descriptive statistical analysis of R&D activities, from an internal and external perspective of the companies and by sector of activity, based on the Community Innovation Survey. It was possible to observe an increase in R&D activities, especially intramural activities, as well as in activities carried out internally, on a continuous basis.

**Keywords:** companies, extramural, intramural, R&D activity, sector

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Research and Development (R&D) means all creative work carried out in a systematic way, with a view to expanding the body of knowledge, including knowledge of man, culture and society, as well as the use of this body of knowledge in new applications [4]. It can be carried out intramurally (R&D carried out within the company) and/or extramurally (external acquisition of R&D). Intramural R&D concerns activities carried out by the company to create new knowledge or to solve scientific or technical problems (it may include software development within the company when it falls within this scope). Extramural R&D concerns the contracting or acquisition of R&D services from other companies or public or private research organizations and may have to do with: (i) Acquisition of machinery, equipment, software and buildings; (ii) Acquisition of existing knowledge (know-how) in other companies or organizations; (iii) Training for innovation activities; (iv) Introduction of innovations to the market, (v) Design, among others. Still regarding intramural R&D, it is important to know whether this occurs continuously, which presupposes that the company has permanent personnel carrying out R&D activities within the company, or whether it only occurs occasionally, when necessary. It is in this context that the present study is intended to be carried out, applied to Portuguese companies and using a descriptive statistical analysis as its methodology, based on the results obtained through the Community Innovation Survey - CIS, for the period between 2016 and 2022. These surveys are biennial and regulated by the European Union/Eurostat, in accordance with the Oslo Manual, being carried out obligatorily since 1993, in all member states and whose results are published with a two-year lag. Therefore, this study is based on three surveys: CIS 2018 [1], CIS 2020 [2] and CIS 2022 [3]. The CIS 2018 survey collected information from 2016 to 2018 and the results were published in 2020; the CIS 2020 survey collected information from 2018 to 2020 and the respective results were made public in 2022; and the CIS 2022 survey collected information from 2020 to 2022, the results of which are

the most recently published, in 2024. From the analysis of the aforementioned results, it was possible to conclude that: In the 2016-2018 three-year period, 7,5% had intramural R&D activities, 4,3% developed these activities on an ongoing basis and 4,0% contracted R&D services to other companies or public or private research organizations (extramural R&D). In the 2018-2020 three-year period, 9,3% had intramural R&D activities, 4,7% developed these activities continuously and 3,6% contracted R&D services to other companies or public or private research organizations (extramural R&D). In the 2020-2022 three-year period, 10,2% had intramural R&D activities, 4,9% developed these activities on an ongoing basis and 4,2% contracted R&D services to other companies or public or private research organizations (extramural R&D). Over the period under analysis, there was a significant percentage increase in R&D activities, especially intramural, which was accompanied by an identical increase in activities carried out internally, on a continuous basis. It should be noted that this percentage fluctuation in activities carried out on a continuous basis presupposes that Portuguese companies have valued the human resources dedicated to R&D to the detriment of meeting this need on an occasional or extramural basis. We can also see that in the last three years under analysis, there was an increase in R&D activities as a whole, as well as in each of the categories (internal and external). By sector of activity, industry or services, none is clearly demarcated throughout the period under analysis, with both being R&D activity. In conclusion, the study allows us to foresee positive results regarding the role of Portuguese companies in the scope of R&D activities, which need, however, to be proven with a more complete analysis to be carried out in the future and with the inclusion of size, economic activity (CAE), geographic region (NUTS), among other aspects.

## References

- [1] DGEEC. Principais resultados: CIS 2018-inquérito comunitário à educação. <https://www.dgeec.mec.pt>, 2020.
- [2] DGEEC. Principais resultados: CIS 2020-inquérito comunitário à educação. <https://www.dgeec.mec.pt>, 2022.
- [3] DGEEC. Principais resultados: CIS 2022-inquérito comunitário à educação. <https://www.dgeec.mec.pt>, 2024.
- [4] OCDE Eurostat. *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data. The Measurement of Scientific and Technological Activities*. OECD Publishing, 2005.