This publication is a Science for Policy report by the Joint Research Centre (JRC), the European Commission’s science and knowledge service. It aims to provide evidence-based scientific support to the European policymaking process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of this publication.

Contact information: JRC-B7-NETWORK@ec.europa.eu

JRC Science Hub
https://ec.europa.eu/jrc

JRC111279
EUR 29151 EN


Luxembourg: Publications Office of the European Union, 2018
© European Union, 2018

Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39).

For any use or reproduction of photos or other material that is not under the EU copyright, permission must be sought directly from the copyright holders.


All images © European Union 2018

RIO Country Report 2017

The R&I Observatory country report 2017 provides a brief analysis of the R&I system covering the economic context, main actors, funding trends & human resources, policies to address R&I challenges, and R&I in national and regional smart specialisation strategies. Data is from Eurostat, unless otherwise referenced and is correct as at January 2018. Data used from other international sources is also correct to that date. The report provides a state-of-play and analysis of the national level R&I system and its challenges, to support the European Semester.
Summary

This first draft of the R&I Observatory country report 2017 provides a brief analysis of the Cypriot R&I system covering the economic context, main actors, funding trends & human resources, policies to address R&I challenges, and R&I in national smart specialisation strategy. Data is from Eurostat, unless otherwise referenced and is correct as at end November 2017. Data used from other international sources is also correct to that date.

Key findings

Cyprus saw GDP growth of 3.0% in 2016. Growth is forecast to increase to 3.5% in 2017 before easing to 2.9% in 2018 and 2.7% in 2019. The public finances are expected to show a surplus of 1.1% in 2017. Unemployment is expected to fall to 9.3% in 2019. Inflation is forecast to a modest 1% in 2017 increasing slightly to 1.4% in 2019 due to increasing wage pressures.

The R&D intensity of Cyprus is the third lowest in the EU at only 0.5% of GDP. This is due to the predominance of non R&D intensive service sectors in the economy with manufacturing only accounting for about 5% of Gross Value Added. Nevertheless there are some exceptions such as pharmaceuticals.

Challenges for R&I policy-making in Cyprus

- Establish a consolidated R&I governance structure and evaluation mechanism of R&I policies for strategic planning and evaluation of R&I policies and funding schemes.

- Exploit research results for creating economic and societal impact: The exploitation of research results in Cyprus is at a very low level. The Global Entrepreneurship Monitor (GEM) report for 2016 ranks Cyprus as 41st out of 66 countries in R&D transfers for business.

- Enhance R&I activity in the business enterprise sector: R&D expenditure in the business enterprise sector of Cyprus is one of the lowest in Europe at 0.10% of GDP.

Main R&I developments in 2017

- The Directorate General for European Programmes, Coordination and Development has prepared an overarching R&I policy document (ERA National Roadmap for Cyprus) with policy suggestions to address these challenges identified. The Roadmap has been approved by the Council of Ministers on 19th of July 2017.

- The Action Plan of the Smart Specialisation Strategy of Cyprus, S3Cy, comprises competitive calls for proposals which require or encourage collaboration (Integrated Projects, Excellence Hubs, New Strategic Infrastructures Units - Young Scientists, DIDAKTOR-post-doctoral researchers, Research in Enterprises, Research in Start-Ups), whereas other calls refer to a single beneficiary and/or come in the form of a small lump sum (Innovation Vouchers, Industrial Property, Encouragement, Complementary Funding). In total, more than 700 proposals were submitted for funding from the RPF, the evaluation of which is underway. Also under the Ministry of Energy, Commerce, Industry and Tourism (MECIT) “Entrepreneurial Innovation” call for proposals, 224 proposals were submitted, of which 84 were approved for funding with a total budget of €10m.

- Tax incentives, for investment by individuals in innovative firms and funding calls to enhance R&I activities are among the actions to tackle the challenge of low R&I spending. The tax incentives aim at giving access to equity funding for start-ups and firms with innovative potential. The funding calls are expected to increase R&I
spending in enterprises considerably due to the own contribution rule (usually of the order of 30% of a project’s budget).

- The Research Promotion Foundation underwent a substantial reform in July 2017 aiming a more efficient R&I policy implementation.

**Foreword**

The R&I Observatory country report 2017 provides a brief analysis of the R&I system covering the economic context, main actors, funding trends & human resources, policies to address R&I challenges, and R&I in national and regional smart specialisation strategies. Data is from Eurostat, unless otherwise referenced and is correct as at January 2018. Data used from other international sources is also correct to that date. The report provides a state-of-play and analysis of the national level R&I system and it's challenges, to support the European Semester.

**Acknowledgements**

Marios Demetriades would like to acknowledge the help of Mr Marinos Portokallides and Mrs Marcia Trillidou from the Research Promotion Foundation, Mrs Irene Kyriacou, Mrs Irene Georgalla and Mr Evgenios Epaminondou from DG for European Programmes, Coordination and Development of Cyprus and Mr Nicos Ioannou and Mr Christos Photiades from the Ministry of Energy, Commerce, Industry and Tourism in providing key statistics as well as information and clarifications on the latest R&I policy developments in Cyprus.

**Authors**

Marios Demetriades, Research and Innovation Policy Unit, Research and Innovation Management and Support Office, The Cyprus Institute, Nicosia, Cyprus (until 31/10/2017), Research Support Service, University of Cyprus, Nicosia, Cyprus (current job)

Nicolas Robledo Bottcher, European Commission, Directorate General Joint Research Centre, Unit B.7, Knowledge for Finance, Innovation and Growth (Brussels, Belgium)
Contents

1 Economic context for R&I ........................................................................................................ 4
  1.1 Structure of the economy .................................................................................................. 4
  1.2 Business environment .................................................................................................... 4

2 Main R&I actors ...................................................................................................................... 5

3 R&I policies, funding trends and human resources .............................................................. 7
  3.1 Public allocation of R&D and R&D expenditure .............................................................. 8
  3.2 Private R&D expenditure ............................................................................................... 9
  3.3 Supply of R&I human resources ................................................................................... 10

4 Policies to address innovation challenges ........................................................................... 11
  Challenge 1: Establish a consolidated R&I governance structure and evaluation mechanism of R&I policies .......................................................... 11
    Description ......................................................................................................................... 11
    Policy response .................................................................................................................. 12
    Assessment ......................................................................................................................... 13
  Challenge 2: Exploit research results for creating economic and societal impact ............... 13
    Description ......................................................................................................................... 13
    Policy response .................................................................................................................. 14
    Assessment ......................................................................................................................... 15
  Challenge 3: Enhance R&I activity in the business enterprise sector .................................. 15
    Description ......................................................................................................................... 15
    Policy response .................................................................................................................. 15
    Assessment ......................................................................................................................... 16

5 Focus on R&I in National and Regional Smart Specialisation Strategies ......................... 17

References .................................................................................................................................. 20

Abbreviations ............................................................................................................................ 22
1 Economic context for R&I

Cyprus has recovered after the financial crisis. Real GDP growth is forecast to accelerate to 3.5% in 2017 from 3% in 2016. For 2018 and 2019 GDP growth is forecast to ease to 2.9% and 2.7% respectively (Autumn Economic forecast, 2017)\(^1\). GDP per capita reached €21,000 up from €20,800 in 2015. The fiscal performance of Cyprus continues to be strong with total revenue expected to increase by 0.8pps of GDP. For 2017 a general budget surplus of 1.1% is expected. As a result the public debt-to-GDP ratio is expected to fall below 100% of GDP by 2018. Growth is forecast to be driven by private consumption and investments, the former being supported by strong consumer confidence and increases in disposable household income amid robust employment. Private investment increased due to rising construction investment resulting from the recovery of the real estate market and sizeable tourist-related projects. Unemployment is expected to continue to its progressive fall to 9.3% in 2019. Inflation is forecast to a modest 1% in 2017 increasing slightly to 1.4% in 2019 due to increasing wage pressures.

1.1 Structure of the economy

The Value added of the service sector as a share of the total value added, was 86.5% and manufacturing 5% in 2016. Both sectors have had a relatively stable share of value since 2012. Knowledge intensive sectors account for the largest share of the service sector activity even though the share has fallen from 51.3% of GVA in 2015 to 46.9% of GVA in 2016 due to the 2013 financial crisis. The opposite trend is observed for high and medium-tech manufacturing which accounted for merely 1.1% of GVA in 2015.

Most of the work force is employed in the service sector which accounted for 80% of total employment in 2016. The knowledge-intensive sectors have employed a stable share of around 37.5% of the labour force since 2012. Employment in high and medium-high technology manufacturing sectors has remained stable since 2009 and was only 0.9% in 2016.

The structure of the Cypriot economy in terms of the size of enterprises consists of 93.3% of micro enterprises, 5.6% of small enterprises, 0.9% of medium-sized enterprises and 0.1% of large enterprises (SBA Factsheet, 2017)\(^2\). There was a significant increase in the net number of new firms in 2016 compared to 2015 with the net additions reaching 2,401 new companies in 2016 marking an increase of 5.15%.

After a very small decline of 0.1% from 2013 to 2014, labour productivity measured as GDP per employee was 105.3 in 2016 (2010=100) basically unchanged compared to 105 in 2015.

1.2 Business environment

In 2016, Cyprus has increased its position in the Global Innovation Index and is now at the 30\(^{th}\) place. In the WB Doing Business rank Cyprus has remained stable at the 45\(^{th}\) place in 2017. As access to finance is a key weakness in Cyprus, especially after the financial crisis which dictated a stricter regulatory framework for credit institutions, the “Ease of Getting Credit” indicator of the Global Innovation Index has also deteriorated, with Cyprus falling from the 39\(^{th}\) position in rank for 2015 to the 56\(^{th}\) position in 2016. An encouraging fact is that the share of SMEs in Cyprus that reported access to finance being its most important problem decreased from 40% in 2014 to 25% in 2015 and 24% in 2016.

A considerable fall is observed for Cyprus in the World Economic Forum Global Competitiveness Index (WEF GCI) from the 58\(^{th}\) position in the period from 2012 to 2015.

---

2 https://ec.europa.eu/docsroom/documents/26562
to the 65th position amongst 140 countries in the 2015-2016 WEF GCI and further down to the 83rd position amongst 138 countries in the 2016-2017 rankings3.

The overall impression is that Cyprus had been declining slowly in terms of business environment due to the economic recession and the increasing unemployment that occurred as an offspring of the 2013 financial crisis coupled with the small financial market sector (Cyprus ranks 120th in this index of WEF GCI). However, in the next few years a fairly evident turnaround should be expected for this trend since Cyprus is now back on track in terms of economic growth and job creation as explained in Section 1.

2 Main R&I actors

The R&I system in Cyprus is still in need of development compared to the more developed systems of the old Member States, albeit significant progress has been achieved in the past 15 years. The economic growth rates of Cyprus from the 1980s onwards until 2008 were characterised as a growth miracle, but this was not due to R&I since the first major research centre (the University of Cyprus) was only established in 1989 and commenced its operations officially in 1992. Before Cyprus had only a small number of governmental authorities which carried out research (Agricultural Research Institute, State General Laboratory) and a small number of private tertiary education institutions. The volume of research output was considerably lower at the end of 1980s (63 journal publications in 1990 as per ISI Web of Science) compared to today’s performance (2,927 journal publications in 2016 as per ISI Web of Science and nearly 20,000 journal publications for the period 1996-2016 according to Scimago4). Figure 1 below shows the structure of the Cypriot R&I system as it looks in 2017.

The Council of Ministers currently acts as the political decision making body for R&I policy as the existing Governance system has proven to be rather inflexible and has been inactive for the past few years. However, this is meant to be a temporary arrangement and the lack of a concrete R&I governance structure remains a key shortcoming of the Cyprus R&I system which needs to be addressed (see Challenge 1).

The Directorate General for European Programmes, Coordination and Development (DG EPCD), is responsible for the design of R&I policy, the funding of which relies heavily on EU Structural Funds (ESIF). The area of responsibility of DG EPCD involves initiatives such as the European Research Area, Open Access to Science, Research Infrastructures (ESFRI), representation of Cyprus in EU Institutions at strategic level, including H2020 and other major European Funding Initiatives.

R&I policy in Cyprus is largely implemented by the Research Promotion Foundation (RPF), which is the main R&I funding agency in Cyprus. The RPF is an autonomous agency under private law, but fully financed by the government. Since its establishment in 1996, the RPF is the main institution responsible for competitive funding of research activities in Cyprus and organises the participation of Cyprus in the EU Framework Programmes for Research and Innovation. Its Board of Directors is presided by the Permanent Secretary of DG EPCD, while ex-officio directors of the main Ministries involved in R&I matters alongside representatives from the business, academic and research community are also members of the Board.

The design of the specific area of entrepreneurial innovation is carried out by the Industry and Technology Service of the Ministry of Energy, Commerce, Industry and Tourism (MECIT), on the basis of the relevant overall national policy. The Industry and Technology Service launches, among others, the business innovation policy measures which are included in the Action Plan of the Smart Specialization Strategy of Cyprus (S3Cy) and is responsible for the formulation of industrial policy, including the

---

promotion of technology and entrepreneurship and the implementation of Business Innovation Policy.

As far as the higher-education sector (HES) is concerned, there are three public universities in Cyprus (University of Cyprus, Cyprus University of Technology and Open University of Cyprus), which carry out the core of the country’s R&I activities, and five private universities (University of Nicosia, European University of Cyprus, Frederick University, Neapolis University and University of Central Lancashire in Cyprus) which are heavily devoted to teaching and less focused on R&I activities (total R&D expenditure of private universities around €7m in 2015 compared to around €35m of public universities) (CySTAT, 2017). The R&I strategic plans of the three public universities have been adjusted in the last two years to become more directed towards the Smart Specialisation Strategy priorities, but their R&I orientation is still based on traditional research areas (such as theoretical sciences) only remotely related to the S3Cy priorities. Another issue is that innovation is still underdeveloped in public universities mainly due to legislative barriers. A new legislation, currently at the House of Representatives for discussion and approval, that promotes commercialisation of research results by public Universities approved by the Council of Ministers is expected to mitigate this gap and increase the contribution of public universities to producing exploitable knowledge for the real economy.

There are also two public benefit research institutes (The Cyprus Institute and the Cyprus Institute for Neurology and Genetics) supported financially by the Government, and which offer Master’s and PhD degrees, but their main purpose is to perform R&I activities. These are analysed further under Private Non Profit organisations (PNPs) below.

A small number of public research performing organisations such as the Agricultural Research Institute, the Department of Fisheries and Marine Research, the Department of Meteorology and the State General Laboratory constitute the last piece of public R&I activity in Cyprus.

In the business sector, a paradox of having a number of particularly successful actors in attracting external R&I funding combined with the very low level of own contribution in R&I spending, is present. While Cypriot SMEs perform considerably well in attracting H2020 funding (as of July 2017, amongst the ten top organisations in Cyprus that benefit from H2020 funding, five are SMEs), they spend only a trivial amount on R&I activities from their own sources (0.10% of GDP in 2015). An exception are SMEs active in the Information and Communication Technologies sector (CETRI, SIGNALGENERIX, CY.R.I.C, ADITESS) and two large domestic pharmaceutical companies (MEDOCHEMIE and REMEDICA). Another reason for the low R&I spending of the business sector is that almost all multinational companies that have an active presence in Cyprus are focused on sales and marketing, whereas their R&I activities are carried out in their headquarters or in other countries than Cyprus.

In 2015, the rate of R&D performed by PNPs in Cyprus (0.07% of GDP) was significantly higher than the EU average level of R&D by PNPs (0.02% of GDP). This owes largely to the activities of two high performing private non-profit research institutions (The Cyprus Institute-CyI and the Cyprus Institute of Neurology and Genetics-CING). CyI was ranked second in funds secured from FP7 and fourth in H2020 despite its small size compared to public universities and CING excels in health-related R&I activities. A reason for the success of the two research institutes is that they are heavily focused on multidisciplinary R&I activities which closely match S3Cy priorities and the H2020 grand societal challenges.

---

5 http://www.mof.gov.cy/mof/cystat/statistics.nsf/science_technology_91main_gr/science_technology_91main_gr?OpenForm&sub=1&sel=2
6 https://ec.europa.eu/research/horizon2020/pdf/country-profiles/cy_country_profile_and_featured_projects.pdf#zoom=125&pagemode=none
3 R&I policies, funding trends and human resources

Main R&I policy developments in 2017

<table>
<thead>
<tr>
<th>Document title, hyperlink and date of publication/announcement</th>
<th>Short description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation for the establishment of a National Academy of Sciences, Letters and Arts approved by the Council of Ministers and the House of Representatives</td>
<td>Cyprus is one of the few countries that did not have a National Academy for Sciences Letters and Arts until the end of 2017. This gap was addressed with this policy development which is expected to increase R&amp;I spending and activities in Cyprus yet further and provide scientific guidance to R&amp;I policy-makers in designing future R&amp;I policies and funding schemes. The legislation was approved by the Council of Ministers on the 31/05/2017 and by the House of Representatives on 10/11/2017.</td>
</tr>
<tr>
<td>Reform of the Research Promotion Foundation (July 2017)</td>
<td>The Research Promotion Foundation underwent a substantial reform on 12 July 2017 aiming at establishing more efficient R&amp;I implementation</td>
</tr>
</tbody>
</table>


R&I funding trends

Cyprus managed to reach its EU 2020 R&D intensity target of 0.5% of GDP in 2016. In absolute terms, R&D expenditure has increased to €91m in 2016 up from €85.2m in 2015. Cyprus is ranked second-to-last amongst EU member states in terms of R&D intensity (Romania 0.49%, Latvia, 0.63% and Malta 0.77%) and far below the EU average of 2.03%. This outlook is expected to change with the funding brought by the RESTART 2016-2020 funding scheme which is the first nationally coordinated R&I Funding Programme since 2011 with a total budget of €100m for the period. It should be noted that as the size of the Cypriot economy is small, a high GDP growth rate may overshadow the rate of increase in absolute R&I spending and R&D intensity may appear lower than in previous years even though absolute real spending levels increase.

The very good performance of Cyprus in securing funding from Horizon 2020 also bodes well for an increase of R&D intensity in the next years. Cyprus has secured for example in 2017 two Teaming Phase-2 projects which have a total budget of €100m (€30m from the EC another €30m from the government and €40m from own contribution and other sources). The impact of this funding on R&D intensity can be substantial since it can add around €10m to annual R&D expenditure and ceteris paribus can increase R&D intensity up to 0.54%.

Figure 2: GERD by source of funds

![CY: GERD by Source of Funds](image)


Figure 2 illustrates the trends of R&D expenditure by source of funds. In 2015 the government spent €43.1m on R&D (50.6% of total spending on R&D), the private sector spent €17.6m (20.7% of total spending on R&D) whereas €17.4m came from the EU (total from abroad at €19.6m).

3.1 Public allocation of R&D and R&D expenditure

In 2015, 27.4% of R&D expenditures (€23.3m) were financed by public resources, compared to €27.7m or 30.9% in 2014, while €19.8m came from the budget of public
universities. Public funding of R&D was estimated at 0.24% of GDP in 2015, and R&D performed by the public sector in 2015 at 0.06% of GDP. Public funding has been steadily decreasing since 2011 mostly because of the financial crisis. More than 86% of the funding for the R&D activities of the public sector comes from the government budget (€9.55m) whereas €0.6m comes from abroad and a negligible amount (€0.015m) comes from the private sector. The HES received funding to the amount of about €20m from the government sector whereas the R&D activity carried out by HES constituted 0.24% of GDP in 2015. Funding from abroad accounted for 23% of total GERD in 2015 of which 88.9% concerned EU funding through ESIF for R&D and participation in Horizon 2020 and FP7.

**Figure 3:** R&D funding by government

![Chart showing R&D funding by government from 2005 to 2015](image)

Data source: Eurostat, November 2017

### 3.2 Private R&D expenditure

BERD reached 0.10% of GDP in 2015. The business enterprise sector, Information and Communication Technologies account for the core of the research activity with expenditures of €10.1m, while the contribution of the manufacturing industry (especially the basic pharmaceutical products and preparations industry) amounts to €7.3m. Figure 3 shows that the pharmaceutical industry has increased its R&D expenditure from €3.8m in 2014 to €5.8m in 2015 and it is the top of the manufacturing sector in R&I activities. This striking increase is due to the rapid development and investment in R&D by the two dominant pharmaceutical firms of Cyprus (Medochemie and Remedica). In the services sector, the ICT sector has also presented a notable increase from €6m in 2013 to €8m in 2014 and to €10.1m in 2015.
Figure 4: Top sectors in BERD for manufacturing and services in Cyprus

Note: Top sectors in manufacturing (C20: Manufacture of chemicals and chemical products; C21: manufacture of basic pharmaceutical products and pharmaceutical preparations; C26: Manufacture of computer, electronic and optical products). Top service sectors (G=wholesale and retail trade, repair of motor vehicles and motorcycles, J=information and communication, M=professional, scientific and technical activities).

3.3 Supply of R&I human resources

The latest statistics for on job-to-job mobility of human resources in science & technology show a mobility rate of 8.6% in 2016 with respect to 2015, marking an improvement compared to 7.4% of the same rate in 2015 with respect to the previous year. In 2015 the number of persons (head-count) employed in the R&D sector was 2,921. In full-time equivalent (FTE) terms, this number is translated in 1,246 persons, of which 509 (40.9%) were female and 40.4% were PhD holders. Of these 1,246 persons, 47% are employed in the tertiary education sector (universities, research institutes, colleges), 21% in business enterprises, 18% in the public sector (excl. public universities) and 14% in the private non-profit sector (CySTAT, 2017). There is an increasing trend for researchers to work in the tertiary education sector as in the period 2005-2015 there was an increase of 32%. In the same period, employment of researchers in the business sector has decreased by 2% whereas this decrease is much higher for the public sector at 38% and is probably due to the austerity measures, which resulted in drastic budget reduction in public authorities that carry out research. The employment of researchers in the private non-profit sector has more than doubled since 2005 with a 103% increase.

DIDAKTOR (Post-Docs) is an action under the RESTART 2016-2020 Funding Programme for R&I which entails the submission of proposals in order to employ post-doctorates in Cypriot organisations. This action promotes inter-sectoral mobility and more specifically the employment of post-doctoral fellows by business enterprises. In the same rationale; the “Integrated Projects” call for proposals of the RESTART 2016-2020 Funding Programme, which promotes the collaboration between all members of the quadruple helix (academia/research, business enterprises, government & societal stakeholders), includes a provision for a budget share floor of 35% of each funded project of business enterprises, with the aim to create new working positions for early stage researchers in enterprises.

Another important initiative for inter-sectoral mobility at the early stages of higher education is the “Liaison Offices” project, which is coordinated by University of Cyprus (UCY) and is active in 7 out of 8 universities of Cyprus, and which is funded by the EU.

---

7 http://ec.europa.eu/eurostat/web/products-datasets/-/hrst_fl_mobsect2
9 https://iris.research.org.cy/file/public/010a37d0-e404-e711-8118-005056ab0fd1
Structural Funds and particularly the European Social Fund. It aims at bridging the gap between academia and business enterprises by matching the demand and supply of specialised human resources. This takes place through placements of university graduates in business enterprises, thus enabling the acquisition of working experience for the students and specialised expertise supply for the employers.

The number of students in Cyprus stood at 37,166 persons for the academic year 2014-2015 of which the majority were females (21,099 or 57%) and 1,109 (3%) were PhD students\(^{10}\) (out of those, 619 or 56% were females). There is an increasing trend in the number of doctorate students between 2013 and 2015 from 829 to 1109 respectively. This is corroborated by the 2017 European Innovation Scoreboard which shows that Cyprus has improved in 2016 for new doctorate students by 27% compared to the EU average of 2010. More than 60% of R&D personnel employed in Cyprus is in STEM fields and this opposes to the percentage of active population who are STEM degree holders which has been decreasing slowly but steadily from 2004 to 2013 with a total decrease of 5.8% (from 24.2% to 22.8%). There nevertheless seems to be an improvement as far as the number of new graduates is concerned. Since 2015, Cyprus had 1.63 new graduates in STEM fields per 1000s of population compared to 1.54 in 2014, while the corresponding figure for the EU28 was 2.2 (Eurostat, 2017\(^{11}\)). An action plan has been put in place to increase the number of students selecting STEM fields, with the target being 20-22% STEM students out of the total by 2020 (Theocharous et al, 2017). Although Cyprus has the EU's second highest tertiary education attainment rate (54.6%, EU average: 38.7%) in 2015 and well above its Europe 2020 national target of 46%, it lacks both STEM graduates and more importantly employability prospects for persons with these specialisations. This applies for younger generations as Cyprus has the highest level of underachievement in sciences from all EU member states, the second highest in Mathematics and the third highest in Reading\(^{12}\). Also, Cyprus has the second lowest employment rate (73.6%) of recent graduates of tertiary education amongst EU member states and compared to the EU average of 81.9%.

4 Policies to address innovation challenges

Challenge 1: Establish a consolidated R&I governance structure and evaluation mechanism of R&I policies

Description

The R&I policy system lacks systematic long term strategic planning based on the input of all relevant stakeholders and the outcome of regular evaluation exercises. The main R&I policy design bodies foreseen in the existing national R&I governance structure, namely the National Research and Innovation Council (NRC) and the Cyprus Scientific Council (CSC) are currently inactive. Therefore, given the inactivity of the aforementioned top level policy-making bodies, R&I policies are handled, to some extent, by the Council of Ministers and are guided primarily by the Smart Specialisation Strategy for Cyprus and its accompanying Action Plan as well as by policy developments in associated particularly relevant areas. The Action Plan for Growth of November 2016 still refers to the intention to improve the Research & Innovation Governance System and notes that discussions on this issue are underway and are based on the study prepared by the National Committee for Research, Innovation and Technological Development (NCRITD). The measure that is related to the creation of a Deputy-Ministry for Growth


and Competitiveness is also relevant as R&I policy-making might be incorporated in the main duties of the aforementioned Deputy Ministry.

The 2016 Country Semester report for Cyprus underlines the need for a more concrete R&I governance structure which will enable efficient and focused spending on R&I activities\(^\text{13}\).

On top of these weaknesses there is a gap in the evaluation of R&I policies as well as an evaluation of the impact of block grants earmarked to public Universities and public benefit research institutes. As regards the evaluation of all national R&I funding schemes, it is noted that the National Monitoring and Evaluation Mechanism which was established in 2015 foresees the monitoring and evaluation of all funding schemes that are included in the Action Plan of the Smart Specialisation Strategy. It is expected that monitoring and assessment will be enhanced in the near future through the use of indicators in addition to progress reports. Furthermore, for the implementation of the RESTART 2016-2020 Programme, RPF is in the process of developing a specific monitoring and evaluation mechanism which will include an interim and final Programme evaluation based on analysis of specific data and predefined Key Performance Indicators, providing an independent view on the effectiveness of the Programme and the degree of achievement of its predefined objectives. Additionally, the evaluation process will aim to capture and highlight the impact and the benefit emerging from program implementation.

**Policy response**

The competent authority (DG EPCD) has prepared an overarching R&I policy document (ERA National Roadmap for Cyprus) which comprises a number of policy suggestions that address to a great extent the challenges identified in the previous and current RIO report. The suggestions are as follows:

- Explore the possibility of the establishment of an Assessment Mechanism for organisations receiving institutional funding, based on core principles of international peer review.
- Establishment of a Monitoring and Evaluation mechanism for the implementation of national R&I policy.
- Take political decision on the upgrade of the R&I Governance structure based on the recommendations of the relevant studies conducted.
- Support Policy making by setting up of Scientific Advisory Committee on R&I issues.
- Use of indicators in the monitoring mechanism for the implementation of the national Smart Specialization Strategy.
- Evaluation of the national Framework Programmes through the systematic Monitoring and set-up of an Evaluation Mechanism which will include Annual Monitoring Reports, an Interim Evaluation (by external experts) in 2018 and an Ex-Post Evaluation in 2023.

In addition, the Research Promotion Foundation underwent a substantial reform in July 2017 to meet the vision of establishing more efficient R&I implementation mechanisms in Cyprus.

On top of that a Bill for the creation of a Deputy Ministry for Growth and Competitiveness (which might also include, inter alia, the issues of research and innovation) is at the time of writing under discussion at the House of Representatives.

Finally, the study prepared by the NCRTD ("Innovate Cyprus" study) proposes policy actions towards setting a concrete R&I governance system and evaluation mechanism for R&I policies and funding schemes.

Assessment

The above suggestions are still in the planning phase with no tangible actions having taken place, yet. The Bill for the creation of a Deputy Ministry for Development and Competitiveness, which forms an umbrella for all development-related policies including R&I, does not explicitly state that R&I will form a core part of its portfolio of activities. In contrast, political statements of the Minister responsible for the Bill have directed otherwise\textsuperscript{14}. As regards the current governance system, it is noted that the National Research and Innovation Council (NRIC) and the Cyprus Scientific Council (CSC) are inactive and unlikely to be revived since it was judged as too bureaucratic. In reality, the system stopped operating when the Chair of CSC resigned in 2014 and from that point onwards no actions were taken at the political level to provide a replacement and sustain the important role that CSC could play in shaping R&I policies in Cyprus. The absence of an executive political supervisor for R&I seems to be the key point in establishing a solid R&I governance structure. To some extent, the existing gap is currently filled, by the Council of Ministers.

As regards the evaluation framework, the performance indicators set under different policy initiatives which have significant overlap (S3Cy, National Policy Statement for the Enhancement of the Entrepreneurial Ecosystem, ERA National Roadmap, ESIF Operational Plans) could be utilised temporarily as replacement for assessment exercises but the need for a more comprehensive R&I evaluation mechanism remains.

Challenge 2: Exploit research results for creating economic and societal impact

Description

The exploitation of research results in Cyprus is at a very low level. The Global Entrepreneurship Monitor (GEM) report for 2016\textsuperscript{15} ranks Cyprus as 41\textsuperscript{st} out of 66 countries in R&D transfer whereas the 2016-2017 WEF GCI puts Cyprus in the 76\textsuperscript{th} position among 138 countries in terms of University-Industry collaboration in R&D\textsuperscript{16}. The country’s remarkable score on community trademarks (275.8% of the EU average in 2016 based on EIS) is mainly due to the Intellectual Property Rights Box scheme, whereas in reality the overall support for entrepreneurship stemming from scientific knowledge is almost non-existent (Theocharous et al, 2017). The causes for this underperformance may lie in various factors such as the very small size of the Cypriot industry, the weakness of the services sector to accommodate university-based innovations (incremental innovations such as process innovations are dominant in the services sector), the lack of a legislative framework which would allow the inventors of public academic and research institutions in Cyprus to participate in the commercialisation of their research results and the geographical distance from the centre of knowledge-intensive industry and services in Europe. These factors overshadow the significant improvement of Cyprus in terms of scientific research output (most cited publications as a % of total publications in 2016 is equal to the EU average, compared to 53.6% of the EU average in 2010 according to EIS 2017). Also Cyprus’ innovation potential is in principle high being ranked at the 17\textsuperscript{th} position among 127 countries for the “Knowledge and Technology Outputs” category of the 2017 Global Innovation Index\textsuperscript{17}.

\textsuperscript{14} https://inbusinessnews.reporter.com.cy/financials/cyprus/article/173635/ypes-kamia-allag-sto-yfypoyrgio-anaptyxis
\textsuperscript{17} https://www.insead.edu/sites/default/files/assets/dept/globalindices/docs/GII-2017-report.pdf
Finance for the exploitation of new science-based knowledge is negligible in Cyprus as venture capital and business angel funding are still at an early stage. Cyprus is ranked 56th out of 66 countries by the GEM 2016 report in entrepreneurial finance. Currently there is only one business angel network operating in Cyprus, the Cyprus Business Angels Network (CyBAN) which comprises 45 investors who have invested in 7 innovative enterprises an amount of approximately €3.6 m in the last three years. An amount of the order of €40 m is assumed to be available for further investments via this business angels network, but the time period within which it is intended to be exploited is not yet defined.

**Policy response**

A Bill for the modification of the existing national legislation governing the operation of public universities has been forwarded to the House of Representatives for discussion and approval. The modification aims to facilitate and encourage the participation of public universities and their members in activities to exploit their scientific findings and knowledge through various channels including participation in spin-offs and start-ups.

Along with the Bill, a Framework of Principles has been developed by the Ministry of Finance, with the participation of stakeholders (Ministry of Education and Culture, Ministry of Energy, Commerce, Industry and Tourism, DG EPCD, RPF and the three public Universities), that will govern activities for exploitation of scientific findings and knowledge developed within public universities. The objective of the Framework of Principles is the optimization of results and the provision of substantial flexibility to public universities, while ensuring conformity to the fundamental missions of the Universities (education, research and innovation), as well as transparency, control and absence of conflict of interest. The proposal received approval by the Council of Ministers on 26 July 2017. This policy development addresses to a significant extent the weakness identified in the 2017 European Semester report about complex and lengthy procedures in the system, lack of incentives and lack of policies promoting cooperation between academia (universities and research centres) and businesses.

The RPF and MECIT have also initiated actions and policy measures under S3Cy that are expected to enhance exploitation and commercialization of research results. MECIT has launched the “Entrepreneurial Innovation” call for proposals in 2014, where the evaluation was completed in 2017 and the first projects started at the end of 2017. The RPF has launched a number of calls in 2017 under the RESTART 2016-2020 Funding Programme, such as “Research in Start-Ups”, “Industrial Property (Patents)”, “Social Innovation”, “Proof of Concept for Technological/Knowhow Applications”, and “Innovation Coupons”. More calls are expected to be launched in 2018, such as “Commercialisation of Research Results by Research Organisations” and “Commercialisation of Research Results by Enterprises”. The National Policy of the Republic of Cyprus for Open Access to Scientific Information was approved by the Council of Ministers in 2016 and it will contribute further to enriching the levels of scientific knowledge produced and its use in the creation of innovations and results worth commercializing both by academia and business enterprises.

Two calls for the development and operation of the Science and Technology Park in the area of Pentakomo, Limassol, were launched by the Ministry of Energy, Commerce, Industry and Tourism has announced (in 2016 and 2017 respectively). As both rounds did not manage to attract enough tenders, the procedure ended with the temporary suspension of the creation a Science and Technology park. The Government is

---

currently examining alternative ways for enhancing investments in Science and Technology.

**Assessment**

Combined with the new legislation approved by the Council of Ministers (and provided it will be approved by the Parliament), which opens the door to public academic/research institutions to create spin-offs, the funding actions of RESTART 2016-2020 are expected to create significant demand for commercialising research results. However, the approval of the legislation is an absolute prerequisite and securing that potential modifications to its provisions will not hinder full functionality of the research results commercialisation system is crucial. This undertaking has higher chances of being achieved since it does not require the existing business enterprise sector to exceed its limited capacity and commercialise research results, but on the contrary, provides opportunities for new start-ups, spin-outs and other forms of new firms to be established thus increasing the critical mass of the business enterprise sector. It is very important that the S3Cy identified sectors are prioritised in order to improve prospects for growth and jobs.

**Challenge 3: Enhance R&I activity in the business enterprise sector**

**Description**

R&D expenditures in the business enterprise sector of Cyprus stands at only 4.7% of the EU average, which is one of the lowest in Europe and has slipped further below the 2010 performance of 5.6% (EIS, 2017) while the contribution of the business enterprise sector in R&I expenditure is limited at only 0.10% of GDP. The WEF GCI ranking places Cyprus on the 107th position amongst 138 countries in terms of R&D spending of companies which shows that Cyprus underperforms on this index. The main cause is the structure of the economy of Cyprus which is heavily oriented towards services and very little on industry, let alone high technology industry. Private R&I investment in the dominant economic sector of Cyprus (services) is underdeveloped and, as mentioned in Challenge 2, innovations in the service sector are largely incremental and do not rely on R&D. The lack of R&I culture amongst the stakeholders of the business enterprise sector is widely identified as a significant impediment for increasing R&I activities. Another key obstacle to business R&I spending is the lack of a strong finance mechanism for providing capital to ambitious enterprises seeking to innovate.

**Policy response**

The tax incentives for investment by individuals in innovative firms adopted in January 2017 are expected to increase R&I in the private sector. These amendments to the law are foreseen to enhance access to equity funding for start-ups and firms with innovative potential, which will mitigate to a considerable extent the inaccessibility of high risk lending from credit institutions to these firms.

The establishment of the Cyprus Entrepreneurship Fund (CYPEF) is based on a joint initiative of the European Investment Bank (EIB) and the Government of the Republic of Cyprus (RoC) through DG EPCD. CYPEF aims at facilitating and enhancing access to finance for SMEs through loans offered on softer terms, including reduced interest rates, potentially reduced collateral requirements, extended loan maturities and longer grace periods.

---


Furthermore, the RPF has launched a number of calls in 2017 under the RESTART 2016-2020 Funding Programmes which are expected to increase R&I spending in enterprises considerably due to the own contribution rule (usually of the order of 30% of a project’s budget). The most important are “Research in Enterprises” and “Research in Start-Ups” followed by the “Integrated Projects” (minimum 35% of the call budget must go to enterprises). The presence of SMEs will also be important in the “DIDAKTOR-Post-Doctoral Researchers” call (the first 10 eligible proposals out of around 32 budgeted will go to enterprises) as well as the “Excellence Hubs” call, where the participation of SMEs is encouraged. Other enterprise related significant calls are currently open such as the “Industrial Property (Patents)”, “Social Innovation”, “Proof of Concept for Technological/Knowhow Applications” and “Eurostars Cyprus”. Furthermore, “Innovation Coupons” call was announced in December 2017.

In addition, MECIT is managing the “Entrepreneurial Innovation” call for proposals which announced the results to the beneficiaries in March 2017. The first grant agreements have been signed in the period from June-August 2017 with a total budget of over €9m.

**Assessment**

All initiatives undertaken to enhance the innovation activities of the business enterprise sector go in the right direction and are likely to produce visible difference in R&I spending, despite the MECIT calls for proposals which had significant delays in being launched. However, the full impact is only expected in the long-term. The very limited size of the manufacturing sector coupled with the nature of innovations taking place in the services sector, which result mostly from management initiatives for improving processes, leave little room for immediate improvement in increasing R&I spending in a robust manner. Beyond the short-term targets set by the relevant policies (S3Cy, National Policy Statement for the Enhancement of the Entrepreneurial Ecosystem) which are likely to be achieved, a major structural reorientation of the economic activities of Cyprus is needed to change the landscape in the next 10 years, should the target for increasing R&I activities in the business sector remain as a core priority. A strong basis was created with the rapid improvement of the science infrastructures, the success in securing funding from Horizon 2020 (total funding and for the creation of new research centres under the Teaming call for proposals), and the quality of knowledge produced by the academic sector. The newly established “Open Access to Scientific Information” policy alongside the legislation for the creation of spin-offs and start-ups by public universities will also help to progressively channel this knowledge towards the creation of innovative products and services. The measures taken to enhance the commercialisation and exploitation of research results produced by academia and research organisations are likely to help in the effort of increasing the size of the knowledge intensive business enterprise sector. An excellent success story is found in the pharmaceutical industry which is specialised in the production of high quality generic drugs and has created a niche in this area, exporting to many other countries and investing substantially in R&I activities.
5 Focus on R&I in National and Regional Smart Specialisation Strategies

The National Strategy on Smart Specialisation (Cyprus being a single region), S3Cy, was approved by the Council of Ministers on 26 March 2015. The priority areas identified through S3Cy are: 1. Tourism, 2. Energy, 3. Structured Environment/Construction Industry, 4. Transport/Marine, 5. Agriculture/Food Industry and 6. Health. Information and Communication Technologies, Environment and Key Enabling Technologies have been identified as horizontal priorities. The implementation of the S3Cy for Research and Innovation in Cyprus relies on an Action Plan, which is planned to be implemented over the period 2016–2020, with a total budget of €143.9m (stand 2017 -the proportion between ESIF and national funds is yet to be finalised). The implementation of S3Cy will be carried out by RPF (RESTART 2016-2020 Funding Programme) and MECIT (Entrepreneurial Innovation related actions). The Ministry of Agriculture, Rural Development and Environment (MARDE) and alongside UCY will be responsible for one action each (Research in Agriculture & University labour market Liaison Offices).

The strategy aims at exploiting the advantages and promising sectors of the economy by leveraging high-quality research results that can be transformed into value added innovations in the selected sectors. At the same time, S3Cy aims to achieve a tangible change of the R&I culture in the business sector to generate a new series of knowledge-based start-ups, whilst tackling the low investment of existing enterprises in R&I activities.

New policy developments

The most recent developments in the implementation of S3Cy is the successful opening and closing of a number of calls for proposals, especially under the RESTART 2016-2020 Funding Programme for R&I of the RPF whereby 14 calls are now closed with 758 proposals received and a planned budget of over €45m (see Table 2 in Appendix). Although the remainder of the planned calls were expected to open by the end of 2017 this did not happen for technical reasons. All remaining calls are expected to open within 2018 with the exception of the Central Technology Transfer Office for which RPF is currently examining legal and State aid aspects.

The MECIT “Entrepreneurial Innovation” call for proposals which was launched in 2014, is progressing with the first evaluation results of the submitted proposals announced to the beneficiaries in March 2017 and the first grant agreements were signed in the period from June-August 2017. All other S3Cy calls under MECIT (Innovation Houses, Innovation Packages, Access to Computational Cloud for SMEs, Business Innovation Centre, and Innovation Clusters) have not been launched yet and there is an on-going discussion on the form they should take and when their opening and management would be viable. It is highly likely given the 2017 conditions, that some of the calls will not be launched before late 2018 which would endanger their feasibility.

The MARDE call (RTDI collaboration in Agriculture) was launched on the 15th of January 2018, whereas the preparatory steps for launching the University Labour Market Liaison Offices scheme are underway.

Progress on implementation

The S3Cy measures consist of a mixture of collaborative research projects, mono-beneficiary grants and indirect funding with the lion’s share of budget being allocated to collaboration. Integrated projects are calls for proposals which require or encourage collaboration (Excellence Hubs, New Strategic Infrastructures, Post-docs, Research in

23 Figures related to the implementation of RESTART 2016-2020 Programmes of the RPF, cover the period from September 2016 to May 2017.
Enterprises) whereas other calls refer to a single beneficiary (Research in Start-Ups) and/or come in the form of a small lump sum (Innovation Vouchers, Industrial Property, Encouragement, Complementary Funding).

For the MECIT “Entrepreneurial Innovation” call for proposals, 224 proposals were submitted, of which 84 were approved for funding with a total budget of €10m. Of these 84 proposals, 8 fall under the Tourism priority, 6 under “Energy”, 9 under Agriculture/Food, 6 under Construction/Built Environment, 6 under Transportation/Shipping and 7 under Health. Thirty-nine proposals fall under the horizontal priority of IT/KET. The “Entrepreneurial Innovation” call is expected to enhance R&I and competitiveness of SMEs by strengthening the potential for private investment through own capital investment for carrying out the project, and by attracting external investments to the enterprises that bring innovation products/services to the market. In terms of S3Cy priorities, Figure 4 shows their allocation under the RESTART 2016-2020 scheme. 24 proposals were received under Tourism, 77 proposals under Energy, 47 proposals under Agriculture/Food, 39 proposals under Construction/Built Environment, 20 proposals under Transport/Shipping and 232 proposals under Health. The Horizontal priorities were also of increased interest since ICT attracted 122 proposals whereas under Environment 42 proposals were submitted. As some calls allowed the free selection of thematic orientation without the prerequisite of focusing on an S3Cy priority, 120 proposals were classified as “Other”, meaning that they fell outside the S3Cy priorities.

Figure 5: Number of total proposals submitted under RESTART 2016-2020 per S3Cy sector of priority (available only for 11 calls and 724 proposals)

From the proposals submitted under RESTART 2016-2020 it is obvious that the top priority (Tourism) has not attracted much interest by the R&I stakeholders (24 proposals, penultimate amongst S3Cy priorities). On contrary Health is by far the sector with the highest number of proposals received (232), which are almost double the next highest S3Cy priority (ICT, 122 proposals). Also, the placement of ICT as horizontal priority may need to be reconsidered since it constitutes a key strength for Cyprus in terms of R&I capacity and its inclusion as main S3Cy priority could be the way forward to reflect this high potential.

In terms of the type of organisation, with specific interest in entrepreneurs, out of the 1672 participants, 502 or 30% were enterprises, 521 or 31.2% were Universities, 306 or 18.3% were research institutes, 195 or 11.7% were other public organisations and 147 or 8.8% were from the private sector (but not enterprises). This distribution shows that enterprises form the second highest participant almost on par with the academic sector.

24 Figures related to the implementation of RESTART 2016-2020 Programmes of the RPF, cover the period from September 2016 to May 2017.
From the 502 participations of enterprises, 408 were from small enterprises, 40 from medium enterprises, 12 from enterprises under establishment (start-ups) and 42 from large enterprises. The total budget requested by enterprises was €63.4m with their own potential contribution amounting to nearly €16m (25%).

**Monitoring mechanisms and the feedback loop**

The S3Cy monitoring mechanism for Cyprus relies on periodic evaluations by the National Monitoring and Evaluation Committee consisting of DG EPCD and the involved policy and implementation bodies (RPF, MECIT, Cyprus Chamber of Commerce and Industry, Cyprus Employers and Industrialists Federation, Rectors’ Synod and Synod of Directors of Research Institutes,). The last meeting of the Committee took place in March 2017 and so far the feedback provided to the Committee was related to the progress in terms of the opening of the planned calls, since the first projects will commence officially by the end of 2017 (Entrepreneurial Innovation call for proposals). The corrective actions that are likely to occur in 2018 concern the MECIT calls for proposals not yet launched, in the form of restructuring for efficiency reasons. MECIT is understaffed, due to personnel reductions that took place to tackle the financial crisis, and the processes for the final design of the schemes along with the submission, evaluation and monitoring of the proposals to be received are heavily bureaucratic. The foreseen solution is an electronic submission system which has already been introduced for the call of Youth and Women Entrepreneurship as a pilot project to be used for the rest of the calls.

**Evidence of impact**

There is no evidence of impact at this stage since all S3Cy-related calls for proposals that were launched are either at the phase of proposal evaluation (RESTART 2016-2020) or initial funding allocation (MECIT-Entrepreneurial Innovation). This is demonstrated in the interim evaluations of the S3Cy and the ESIF Operational Programmes of Cyprus, which include the S3Cy calls and mark all key performance indicators as being non-applicable or null. The expected impact can be estimated judging on the volume of response by the Cypriot R&I community to the S3Cy calls for proposals per S3Cy priority, technology area and other horizontal priorities as analysed above.

25 http://www.research.org.cy/images/media/assetfile/%CE%91%CE%BD%CE%B1%CF%86%CE%BF%CF%81%CE%AC_0916_0517.pdf
References


JRC-IPTS (2015), Stairway to Excellence Facts and Figures: Cyprus http://s3platform.jrc.ec.europa.eu/documents/20182/117536/S2E_CY_national_profile.pdf/0e48b26a-e213-4d56-9fa8-9b7b82b6643b


SBA Fact Sheet Cyprus (2016)

Statistical Service of Cyprus (last consulted August 2017):

Strogylopoulos, G. and Harrap, N. (2015), Stairway to Excellence country report Cyprus. European Commission, Joint Research Centre:


Unit for Administrative Reform Presidency (2016): Revised Action Plan for Growth
https://issuu.com/presidency-reform-cyprus/docs/revised_action_plan_for_growth


World Bank (2016), Doing Business 2017

Abbreviations
BERD: Business Expenditure for Research and Development
CTTO: Central Technology Transfer Office
CSC: Cyprus Scientific Council
CyBAN: Cyprus Business Angels Network
CYPEF: Cyprus Entrepreneurship Fund
DG EPCD: Directorate General for European Programmes, Coordination and Development
EC: European Commission
EIS: European Innovation Scoreboard
ERA: European Research Area
EU: European Union
EU28: European Union 28 Member States
GDP: Gross Domestic Product
GEM: Global Entrepreneurship Monitor report
GERD: Government Expenditure for Research and Development
GII: Global Innovation Index
GVA: Gross Value Added
HEI: Higher Education Institution
HES: Higher Education Sector
ICT: Information and Communications Technology
IPR: Intellectual Property Rights
ISI: Institute for Scientific Information
MARDE: Ministry of Agriculture, Rural Development and Environment
MECIT: Ministry of Energy, Commerce, Industry and Tourism
NRIC: National Research and Innovation Council
NCRITD: National Committee for Research, Innovation and Technological Development
PCT: Patent Cooperation Treaty
RESTART 2016-2020: Funding Programme for Research, Technological Development and Innovation for the period 2016-2020
RoC: Republic of Cyprus
RTDI: Research, Technological Development and Innovation
R&D: Research and Development
R&I: Research and Innovation
RPF: Research Promotion Foundation
SAFE: Survey on the Access to Finance of Enterprises
SME: Small and Medium-sized Enterprise
STEM: Science, Technology, Engineering and Mathematics
S3Cy: Smart Specialisation Strategy of Cyprus
UCY: University of Cyprus
WEF GCI: World Economic Forum Global Competitiveness Index
## Factsheet

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita (euro per capita)</td>
<td>23100</td>
<td>23300</td>
<td>23200</td>
<td>22600</td>
<td>21000</td>
<td>20700</td>
<td>20900</td>
<td>21300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value added of services as share of the total value added (% of total)</td>
<td>79.59</td>
<td>80.9</td>
<td>83.23</td>
<td>84.95</td>
<td>86.49</td>
<td>87.23</td>
<td>86.8</td>
<td>86.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value added of manufacturing as share of the total value added (%)</td>
<td>6.12</td>
<td>5.81</td>
<td>5.21</td>
<td>4.67</td>
<td>4.32</td>
<td>4.65</td>
<td>4.84</td>
<td>5.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment in manufacturing as share of total employment (%)</td>
<td>9.36</td>
<td>8.98</td>
<td>8.69</td>
<td>8.32</td>
<td>7.97</td>
<td>7.73</td>
<td>7.75</td>
<td>7.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment in services as share of total employment (%)</td>
<td>73.63</td>
<td>74.55</td>
<td>75.8</td>
<td>77.06</td>
<td>79.04</td>
<td>79.96</td>
<td>80.05</td>
<td>80.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share of Foreign controlled enterprises in the total nb of enterprises (%)</td>
<td>0.59</td>
<td>0.63</td>
<td>0.65</td>
<td>0.64</td>
<td>0.65</td>
<td>0.63</td>
<td>0.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labour productivity (Index, 2010=100)</td>
<td>98.4</td>
<td>100</td>
<td>101.1</td>
<td>101.6</td>
<td>103.3</td>
<td>104.3</td>
<td>105</td>
<td>105.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New doctorate graduates (ISCED 6) per 1000 population aged 25-34</td>
<td>0.18</td>
<td>0.15</td>
<td>0.26</td>
<td>0.26</td>
<td>0.26</td>
<td>0.34</td>
<td>0.31</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary Innovation Index (rank)</td>
<td>15</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovative enterprises as a share of total number of enterprises (CIS data) (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42.1</td>
<td>41.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation output indicator (Rank, Intra-EU Comparison)</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover from innovation as % of total turnover (Eurostat)</td>
<td>14.7</td>
<td>11.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country position in Doing Business (Ease of doing business index WB)(1=most business-friendly regulations)</td>
<td>60</td>
<td>47</td>
<td>45</td>
<td>45</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ease of getting credit (WB GI) (Rank)</td>
<td>56</td>
<td>39</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC Digital Economy &amp; Society Index (DESI) (Rank)</td>
<td>23</td>
<td>22</td>
<td>21</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Government Development Index Rank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64</td>
</tr>
<tr>
<td>Online availability of public services – Percentage of individuals having interactions with public authorities via Internet (last 12 months)</td>
<td>24</td>
<td>25</td>
<td>29</td>
<td>30</td>
<td>30</td>
<td>41</td>
<td>34</td>
<td>38</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>GERD (as % of GDP)</td>
<td>0.44</td>
<td>0.45</td>
<td>0.46</td>
<td>0.44</td>
<td>0.48</td>
<td>0.51</td>
<td>0.48</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBAORD (as % of GDP)</td>
<td>0.45</td>
<td>0.42</td>
<td>0.41</td>
<td>0.36</td>
<td>0.33</td>
<td>0.35</td>
<td>0.34</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D funded by GOV (% of GDP)</td>
<td>0.31</td>
<td>0.31</td>
<td>0.32</td>
<td>0.28</td>
<td>0.29</td>
<td>0.27</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BERD (% of GDP)</td>
<td>0.09</td>
<td>0.08</td>
<td>0.07</td>
<td>0.07</td>
<td>0.09</td>
<td>0.11</td>
<td>0.11</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research excellence composite indicator (Rank)</td>
<td>17</td>
<td>18</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of scientific publications among the top 10% most cited publications worldwide as % of total scientific publications of the country</td>
<td>7.47</td>
<td>9.49</td>
<td>7.02</td>
<td>8.85</td>
<td>9.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public-private co-publications per million population</td>
<td>17.57</td>
<td>28.08</td>
<td>22.63</td>
<td>19.72</td>
<td>13.86</td>
<td>6.99</td>
<td>7.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Share of PCT applications</td>
<td>0.01</td>
<td>0.01</td>
<td>0</td>
<td>0.01</td>
<td>0</td>
<td>0.01</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Innovation Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27</td>
<td>30</td>
</tr>
</tbody>
</table>

<p>|         | 34      | 31      | 30      |         |         |         |         |         |         |         |</p>
<table>
<thead>
<tr>
<th>No.</th>
<th>Call for proposals</th>
<th>Call budget (€)</th>
<th>No. of submitted proposals</th>
<th>Budget of submitted proposals (€)</th>
<th>Requested funding (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INTEGRATED PROJECTS</td>
<td>12,000,000</td>
<td>53</td>
<td>56,279,238</td>
<td>47,047,743</td>
</tr>
<tr>
<td>2</td>
<td>COMPLEMENTARY FUNDING</td>
<td>4,000,000</td>
<td>1</td>
<td>34,213</td>
<td>34,212</td>
</tr>
<tr>
<td>3</td>
<td>RESEARCH IN ENTERPRISES</td>
<td>4,000,000</td>
<td>77</td>
<td>19,790,258</td>
<td>15,479,237</td>
</tr>
<tr>
<td>4</td>
<td>POST-DOCs</td>
<td>4,800,000</td>
<td>193</td>
<td>28,716,629</td>
<td>28,189,706</td>
</tr>
<tr>
<td>5</td>
<td>BILATERAL-FRANCE</td>
<td>30,000</td>
<td>4</td>
<td>19,904</td>
<td>19,904</td>
</tr>
<tr>
<td>6</td>
<td>NEW INFRASTRUCTURES</td>
<td>8,000,000</td>
<td>63</td>
<td>63,818,865</td>
<td>62,372,845</td>
</tr>
<tr>
<td>7</td>
<td>EXCELLENCE HUBS</td>
<td>10,100,000</td>
<td>284</td>
<td>64,202,335</td>
<td>62,951,480</td>
</tr>
<tr>
<td>8</td>
<td>RESEARCH IN START-UPS</td>
<td>250,000</td>
<td>31</td>
<td>1,870,408</td>
<td>1,515,132</td>
</tr>
<tr>
<td>9</td>
<td>PPSUGI</td>
<td>400,000</td>
<td>3</td>
<td>482,293</td>
<td>482,293</td>
</tr>
<tr>
<td>10</td>
<td>EUROSTARS CYPRUS (0117)</td>
<td>400,000</td>
<td>6</td>
<td>1,248,574</td>
<td>881,028</td>
</tr>
<tr>
<td>11</td>
<td>PPSOLAR</td>
<td>400,000</td>
<td>9</td>
<td>1,695,549</td>
<td>1,451,149</td>
</tr>
<tr>
<td>12</td>
<td>SOCIAL INNOVATION</td>
<td>600,000</td>
<td>14</td>
<td>1,400,000^</td>
<td>1,400,000^</td>
</tr>
<tr>
<td>13</td>
<td>PROOF OF CONCEPT</td>
<td>250,000</td>
<td>13</td>
<td>464,300^</td>
<td>325,000^</td>
</tr>
<tr>
<td>14</td>
<td>EUROSTARS CYPRUS (0717)</td>
<td>400,000</td>
<td>7</td>
<td>1,750,000^</td>
<td>1,225,000^</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>45,630,000</strong></td>
<td><strong>758</strong></td>
<td><strong>241,872,566</strong></td>
<td><strong>223,374,729</strong></td>
</tr>
</tbody>
</table>

* e=estimate
List of figures

Figure 1: R&I system in Cyprus as in 2017: Policy-making bodies, funding instruments and key stakeholders ........................................................................................................................................................................... 7

Figure 2: GERD by source of funds .............................................................................................................................................................................................................. 8

Figure 3: R&D funding by government ....................................................................................................................................................................................................... 9

Figure 3: Top sectors in BERD for manufacturing and services in Cyprus ................................................................. 10

Figure 4: Number of total proposals submitted under RESTART 2016-2020 per S3Cy sector of priority (available only for 11 calls and 724 proposals) ................................................................. 18

List of tables

Table 1: Number of submitted proposals, budget and requested funding per RESTART 2016-2020 call for proposals that closed in 2017 .................................................................................................................. 24
GETTING IN TOUCH WITH THE EU

In person
All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: http://europea.eu/contact

On the phone or by email
Europe Direct is a service that answers your questions about the European Union. You can contact this service:
- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696, or
- by electronic mail via: http://europa.eu/contact

FINDING INFORMATION ABOUT THE EU

Online
Information about the European Union in all the official languages of the EU is available on the Europa website at: http://europa.eu

EU publications
You can download or order free and priced EU publications from EU Bookshop at:
http://bookshop.europa.eu. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see http://europa.eu/contact).
JRC Mission
As the science and knowledge service of the European Commission, the Joint Research Centre’s mission is to support EU policies with independent evidence throughout the whole policy cycle.

EU Science Hub
ec.europa.eu/jrc
@EU_ScienceHub
EU Science Hub - Joint Research Centre
Joint Research Centre
EU Science Hub

doi:10.2760/8524