

**Deloitte.**

Researchers' Report 2014

**Country Profile: Malta**



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## 1. Key data

### National R&D intensity target

Malta's R&D intensity increased from 0.67% in 2010 to 0.73% in 2011<sup>1</sup>. The significant increases in R&D expenditures in 2010 and 2011 translated into levels of expenditures which did not follow the negative trends of the previous years. This resulted in a situation where, Malta reached and exceeded its stipulated Europe 2020 Strategy target of 0.67% of GDP ahead of time. If the current trend continues Malta should reach an R&D intensity of more than 1% in 2020<sup>2</sup>. The increase in R&D intensity between 2009 and 2010 was mainly due to an increase of 41% in R&D performed by the higher education sector. Funding of R&D by each of the three main sources (government, business and abroad) has increased by 20% or more between 2009 and 2010.

In spite of the economic crisis, public expenditure on R&D increased by 35.1% between 2009 and 2010. This was due to an increase of EUR 4.2 million in higher education expenditure on R&D. Government intramural expenditure on R&D decreased slightly between 2009 and 2010. Government funding of R&D has increased steadily between 2005 and 2010 at an average annual real growth rate of 7.7%. However, the government budget for R&D which increased from EUR 9.4 million to EUR 14.3 million between 2009 and 2010 has decreased by 19% between 2010 and 2011. This development is a cause for concern in view of the likely negative impact on future R&D intensity.

Malta is ranked nineteenth in the EU in terms of business enterprise expenditure on R&D as % of GDP with a value of 0.37% in 2010 compared to an EU average of 1.23%. The share of R&D performed by business enterprise in Malta has decreased from 66% in 2005 to 59% in 2010. R&D financed by business enterprise increased in real terms between 2005 and 2010 at an average annual growth rate of 6.3%. Most of Malta's business R&D is carried out by a small cluster of foreign-owned companies. 43% of R&D carried out by foreign-owned companies is performed by US owned companies.

Malta relies heavily on support from the EC Framework Programme and Structural Funds for the achievement of its R&I objectives. FP7 projects in Malta have been awarded EUR 20 million to date (till February 2014). The success rate of Maltese applicants for FP7 funding is 19.1% compared to an EU average of 22.0%. Malta will also receive around EUR 70 million for innovation and RTD from the Structural Funds 2007-2013. One of the objectives of the National R&I Strategy 2020 is to put in place an appropriate national framework to exploit opportunities for participation in EU R&I funding programmes.<sup>3</sup>

### Key indicators measuring the country's research performance

The figure below presents key indicators measuring Malta's performance on aspects of an open labour market for researchers against a reference group and the EU average<sup>4</sup>.

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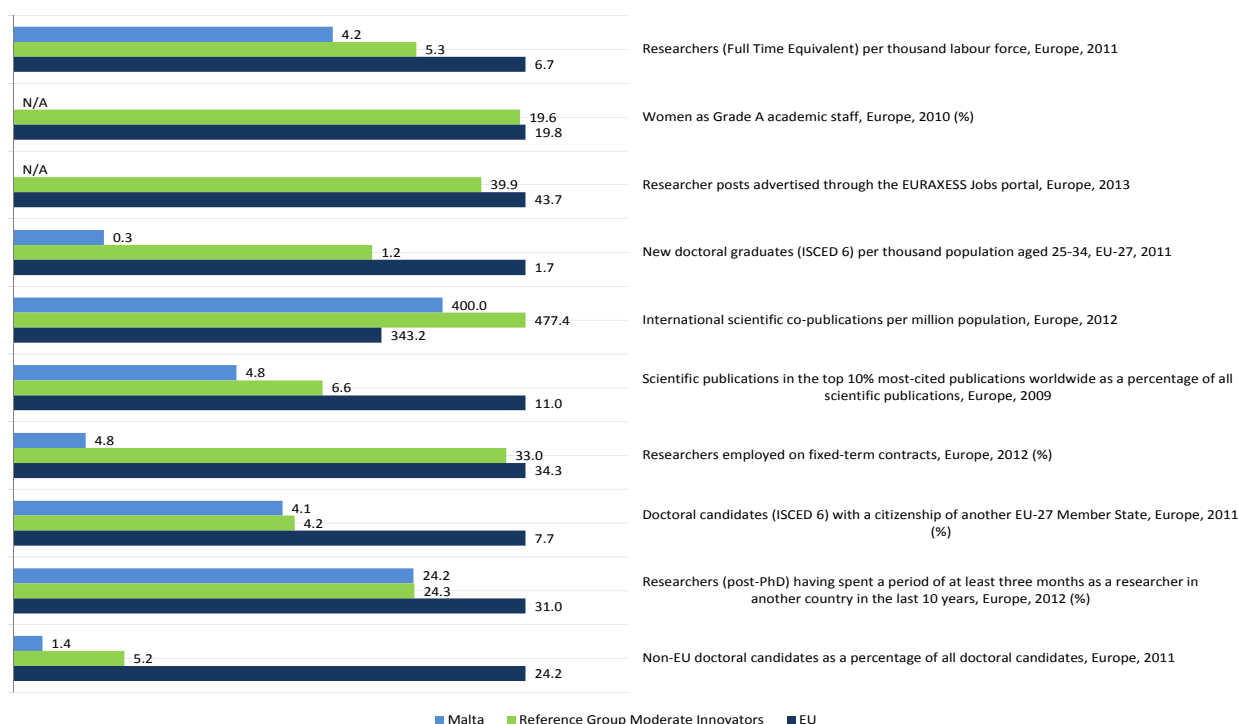
<sup>1</sup> In 2012, R&D expenditure was 0.84% (Eurostat, 2014).

<sup>2</sup> In September 2013, the Maltese government informed the European Commission that its national R&D target for 2020 has been reset to 2%.

<sup>3</sup> European Commission (2013), "Research and Innovation performance in EU Member States and Associated countries. Innovation Union progress at country level 2013"

<sup>4</sup> The values refer to 2013 or the latest year available

Figure 1: Key indicators – Malta



Source: Deloitte

Data: Eurostat, SHE Figures, EURAXESS Jobs Portal, UNESCO OECD Eurostat education survey, Innovation Union Scoreboard 2014, MORE2.

Notes: Based on their average innovation performance across 25 indicators, Croatia, Czech Republic, Greece, Hungary, Italy, Lithuania, Malta, Poland, Portugal, Slovakia and Spain show a performance below that of the EU average. These countries are “Moderate innovators”<sup>5</sup>.

## Stock of researchers

The table below presents the stock of researchers by Head Count (HC) and Full Time Equivalent (FTE) and in relation to the active labour force.

Table 1: Human resources – Stock of researchers

Indicator	Malta	EU Average/Total
Head Count per 1 000 active labour force (2011)	7.06	10.55
Head Count (2011)	1 273	2 545 346
FTE per 1 000 active labour force (2011)	4.21	6.75
Full time equivalent (FTE) (2011)	759	1 628 127

Source: Deloitte

Data: Eurostat

## 2. National strategies

The Maltese Government has put in place a range of measures aimed at training enough researchers to meet its R&D targets and at promoting attractive employment conditions in public research institutions. The table below presents key programmes and initiatives intended to implement the strategic objectives to train enough researchers to reach Malta’s R&D targets, to promote attractive working conditions, and to address gender and dual career issues.

Table 2: National strategies

Measure	Description
<b>Malta’s National Reform Programme Under the Europe 2020 Strategy (2011, 2012 and 2013)</b>	Malta’s National Reform Programme (NRP), published by the Ministry of Finance, the Economy and Investment, contains 25 distinct new measures aimed at ensuring that Malta achieves its Europe 2020 targets. The National Reform Programme refers to the development of doctoral and postdoc funding schemes as one of the

<sup>5</sup> European Commission (2014), “Innovation Union Scoreboard 2014”

Measure	Description
	<p>measures to increase the number of scientific researchers in the country. Seven distinct sets of structural reform measures are meant to address growth bottlenecks and macroeconomic imbalances, and increase Malta's competitiveness. The total outlays on these measures, which are covered by a mix of private funds, EU funds and public funds, are estimated at EUR 578 million. Among other measures, Malta's 2012 National Reform Programme reiterated the government's commitment to funding doctoral and post-doctoral scholarship schemes in order to strengthen Malta's research capacity. In addition, the 2013 National Reform Programme referred to supporting increased researcher mobility through an 'Internationalisation Scoping Exercise'. The insights learned from this exercise are presently being assessed and will feed into the development of the National R&amp;I Action Plan, to be finalised by the end of 2014, and which will complement the National R&amp;I Strategy.</p> <p>The NRP for the year 2014 has been prepared and officially submitted to the CION on 16 April 2014. However, the document is not publicly available yet.</p>
<b>Malta's National Reform Programme 2008-2010 (2008)</b>	<p>Malta's National Reform Programme 2008-10 focused on a number of issues for national competitiveness, including investing in people and modernising labour markets. The Strategy clearly defined the need for incentives to promote research, development and innovation capacity in Malta. It also promoted the need for fiscal incentives to those industries that cluster with SMEs and Higher Education Institutions, and targeted the following industrial areas, among others: education, health care, ICT, bio-technology, bio-informatics.</p>
<b>National R&amp;I Strategy 2020 (2014)</b>	<p>The Malta Council for Science and Technology has ended the preparation of the new National R&amp;I Strategy 2020. A draft National R&amp;I Strategy 2020 was issued for public consultation in September 2013. An updated, final draft was endorsed by Cabinet in February 2014. This new Strategy retains the Vision and Mission of the 2007-2010 National Strategic Plan for R&amp;I and supersedes a draft of a successor to the 2007-2010 Plan.</p> <p>The new strategy focuses on three overarching objectives which emerged through an extensive desk-based analysis, interviews with the public sector and social partners as well as input from private sector focus groups. These objectives are: (1) achieving a comprehensive R&amp;I support ecosystem, (b) achieving a stronger knowledge base and (c) Smart, flexible specialisation. Human capacity issues are addressed under all three goals, with a particular focus on researcher careers under the second goal. A holistic approach, addressing both the input to the researcher career (i.e. the education system), and the eventual 'pull' factor generated by research career opportunities, are addressed.</p>
<b>National Strategic Plan for Research and Innovation 2007-2010 (2006)</b>	<p>The 2007-2010 R&amp;I Strategic Plan aimed to provide a framework for building and sustaining an R&amp;I-enabling framework. The measures implemented included:</p> <ul style="list-style-type: none"> <li>- Overhaul of the Malta Council for Science &amp; Technology's organisational structure and increase in staff complement (from 8.5 FTE in 2007 to just over 30 FTE in October 2011);</li> <li>- Boosting human resources in S&amp;T and increasing researcher numbers: Strategic Educational Pathways Scholarships (STEPS) (EUR 10 million ESF<sup>6</sup> project) and Malta Government Scholarship Scheme (MGSS) schemes (approximately EUR 466 000 annually through national funds) for the funding of Master and Doctorate studies undertaken both locally and abroad; science popularisation campaigns through a EUR 0.58 million ESF project over a two-year-period. Two science and technology festivals as well as other events targeting science in the community were organised through this project;</li> <li>- Work towards establishing bilateral agreements and collaborative initiatives with international scientific organisations (e.g. CERN<sup>7</sup>, ESA<sup>8</sup> and EMBL<sup>9</sup>), including possible access to research infrastructures;</li> <li>- Awareness-raising on the importance of patents and support for SMEs to identify IP<sup>10</sup> opportunities through the IP check-up diagnostic service; and</li> </ul>

<sup>6</sup> European Social Fund

<sup>7</sup> European Organisation for Nuclear Research

<sup>8</sup> European Space Agency

<sup>9</sup> European Molecular Biology Laboratory

Measure	Description
	– Financial support for researchers to participate in brokerage events in the priority areas of research.

Source: Deloitte

### 3. Women in the research profession

#### Measures supporting women researchers in top-level positions

In Malta, the National Commission for the Promotion of Equality (NCPE) was set up in 2004 and since then it has acted as an autonomous government-funded organisation, which monitors the application of equality legislation. The primary task of NCPE is to monitor the implementation of the Chapter 456 Equality for Men and Women Act that came into force in December 2003 and to promote equality in spheres where it may be lacking. The Commission works to ensure that Maltese society is free from any form of discrimination based on gender or family responsibilities in all sectors and at all levels in relation to training and employment, and the provision of services and benefits. The Commission also works to ensure that there is no discrimination based on racial and/or ethnic origin in the provision of goods and services.

However, there are currently no initiatives specifically targeting the research profession. Gender issues in Research, Development and Innovation in general, were discussed and analysed in the context of the preparation of the new National R&I Strategic Plan 2020.

However, it is worth pointing out that scholarship opportunities have been opened up for distance learning and part time courses besides full time studies. This measure was intended to help women who are still young, building a family and at the same time developing a career, not to abandon their employment or affect the mobility of the family while still have the opportunity to further their studies. As a result of this measure, a substantial increase in women furthering their studies has been noted.

#### Measures to ensure a representative gender balance

In Malta, there are no quotas, targets or other measures in place to ensure gender balance in research careers and in selection/evaluation committees for engagement of researchers.

Malta's National Commission for the Promotion of Equality (NCPE) is committed to empowering more women to participate in decision-making positions. In this regard, NCPE is working on various initiatives that aim at enhancing the gender balance in decision-making. To this end, a Directory of Professional Women will give further visibility to professional women and their competences in various fields, including research. This Directory will include information about the qualifications, experience and skills of Maltese and Gozitan professional women and will identify women in various sectors who have the possibility of being appointed to serve on Boards, Committees, Representations or any other decision-making positions. In addition, a mentoring programme will provide women aspiring to hold decision-making positions with the opportunity to be mentored by persons who occupy high-level jobs to further empower these mentees to participate in decision-making positions, alongside training and a publicity campaign. In addition, research will be carried out on gender-balanced representation in decision-making and on gender quotas and other measures to provide valuable findings and recommendations to policymakers in this regard.

#### Parental leave

In the case of the MGSS, STEPS and Master it! scholarship schemes, there is/was<sup>11</sup> no specific mention of provision for maternity leave. However, section 14.25 of the MGSS Regulations (2011) indicates that women researchers are allowed to go on maternity leave, thus interrupting and extending their studies. The Regulations state that "in special and valid circumstances that may arise, scholarship awardees may ask the MGSS Board to review the date of completion of their scholarship specifying the reason for such extension. Each case will be considered on its own merits".

On the other hand, the Regulations also indicate that when a programme of studies is extended, no additional funding will be allocated in addition to the amount originally established.

<sup>10</sup> Intellectual Property

<sup>11</sup> STEPS has been superseded by Master it!

As of 2013, there had been 1 request by a MGSS beneficiary who submitted a request for a suspension of studies due to maternity leave. This was granted. No projected funds for the scholarship will be lost by the beneficiary because she will continue to benefit from these funds on resuming her studies.

Scholarships include family-friendly measures, such as marriage allowance and child allowance.

## 4. Open, transparent and merit-based recruitment

### Recruitment system

The University of Malta has its own recruitment system. This is regulated by the Collective Agreement (2009-13)<sup>12</sup> and by subsidiary regulations. Maltese public institutions fall into two categories, which follow different regulations and procedures:

1. The Public Service: government ministries and departments, which are generally bound by strict regulations; and
2. The Public Sector: government entities, which are not ministries or departments, and which enjoy a degree of procedural autonomy. These are corporations and authorities set up by law, companies set up as Public Limited Companies, foundations set up by notarial deeds, agencies set up either by act or legal notice, or by virtue of the Public Administration Act, and “bodies” set up by the Government according to the Constitution.

Recruitment to the Maltese Public Service is carried out in accordance with Article 110(1) of the Constitution of Malta and is based on merit.

Appointments/promotions in Salary Scales 1 - 5 are approved by the Prime Minister acting on the recommendation of the Public Service Commission (PSC)<sup>13</sup>, whilst appointments/promotions in Salary Scales 6-20 are approved by the PSC in terms of an Instrument of Delegation in terms of Article 110 of the Constitution of Malta.

The recruitment and selection process leading to the appointment of public officers in any grade or position within the Public Service is regulated by the Public Service Management Code (PSMC) and is carried out in accordance with procedures outlined in Sections 1.1.6 and 1.1.7 of the Code<sup>14</sup>.

Recruitment within public sector entities is carried out in accordance with Article 110(6) of the Constitution of Malta through the national employment agency or through a public advertisement. Furthermore, in terms of the Employment and Training Services Act (Cap. 343), recruitment initiatives are channelled through the national Employment and Training Corporation. Public sector entities establish their own recruitment and selection procedures. As a general rule, however, it is always recommended that public sector entities follow the procedures applicable to the Public Service and featured in the Public Service Management Code in order to ensure open, transparent and merit-based competition.

### Open recruitment in institutions

The table below presents information on open recruitment in higher education and public research institutions.

**Table 3: Open recruitment in higher education and public research institutions<sup>15</sup>**

Do institutions in the country currently have policies to ...?	Yes/No	Description
– <b>publish job vacancies on relevant national online platforms</b>	Yes	– The University of Malta advertises its vacancies online on its own website while its job vacancies are available through EURAXESS; – There are no plans at present to publish public service and

<sup>12</sup> Possible renewal of the Collective Agreement is going under discussion.

<sup>13</sup> The PSC is an autonomous body appointed in accordance with the Constitution of Malta. The Constitution assigns to the Commission responsibility for staffing and discipline in the Public Service. One of the main functions of the PSC is the protection of merit.

<sup>14</sup> For more information, see <http://pahro.gov.mt/employee-psmc?!=1>

<sup>15</sup> Information provided in this table refers to the University of Malta, which is by far the largest player in Higher Education R&D (HERD) in Malta. Information is also given about the recruitment procedure for researchers (inter alia) in the Government Sector (public sector and public service), thus covering the Government Sector R&D (GOVERD).



Do institutions in the country currently have policies to ...?	Yes/No	Description
		<p>public sector jobs on EURAXESS.</p> <p>A) Public Service vacancies are published as follows<sup>16</sup>:</p> <ol style="list-style-type: none"> <li>I. on the Government Recruitment Portal (<a href="http://recruitment.gov.mt/">http://recruitment.gov.mt/</a>);</li> <li>II. on the Department of Information website (<a href="http://www.doi.gov.mt">www.doi.gov.mt</a>) in the case of public calls for applications;</li> <li>III. on the Public Service intranet (<a href="http://intra.gov.mt/">http://intra.gov.mt/</a>) in the case of internal calls for applications, that is, calls open to serving public officers;</li> <li>IV. on departmental notice boards.</li> </ol> <p>B) Public sector research vacancies are published online together with other public sector vacancies as follows:</p> <ol style="list-style-type: none"> <li>I. on Malta's public employment agency website, the Employment and Training Corporation (<a href="http://www.etc.gov.mt">www.etc.gov.mt</a>);</li> <li>II. on the Department of Information website (<a href="http://www.doi.gov.mt">www.doi.gov.mt</a>);</li> <li>III. generally in addition on the recruiting institution's own website.</li> </ol>
– <b>publish job vacancies on relevant Europe-wide online platforms (e.g. EURAXESS)</b>	Yes/No	<ul style="list-style-type: none"> <li>– The EURAXESS portal is directly linked to the University of Malta vacancies' webpage;</li> <li>– Public Service and Public Sector research vacancies are not published on Europe-wide platforms.</li> </ul>
– <b>publish job vacancies in English</b>	Yes	Both the University of Malta and the Public Service publish job vacancies in both Maltese and English.
– <b>systematically establish selection panels</b>	Yes	<ul style="list-style-type: none"> <li>– The University of Malta establishes selection panels according to its internal Guidelines as issued by the University Council.<sup>17</sup>;</li> <li>– The PSC Regulations provide for the setting up of Ministerial Standing Selection Panels (SSPs) made up of retired public officers and other members of the general public. This procedure is in line with the principles of openness, transparency and inclusion.</li> <li>– The Head of Department may appoint a Selection Board, consisting of a Chairperson and at least two members, from amongst the persons forming part of the Ministerial SSP and/or serving public officers, provided that each Selection Board includes at least one serving public officer. This process is carried out concurrently with the publication of the call for applications.</li> </ul>
– <b>establish clear rules for the composition of selection panels (e.g. number and role of members, inclusion of foreign experts, gender balance, etc.)</b>	Yes	<ul style="list-style-type: none"> <li>– The University of Malta has established clear rules for the composition of selection panels which are issued by its Council;</li> <li>– The Public Service has clear rules for the composition of selection panels, as to the number, role and level of expertise. The Public Service Management Code states that, as far as possible, selection panels should include members of both genders.</li> </ul>
– <b>publish the composition of a selection panel (obliging the recruiting institution)</b>	No	<ul style="list-style-type: none"> <li>– The University of Malta publishes guidelines for the composition of selection panels on its website, but the names of the selection panel members are not published;</li> <li>– The Public Service Management Code (which establishes the guidelines for the composition of selection panels) is</li> </ul>

<sup>16</sup> Sections 1.2.12 and 9.1.1.4 of the Public Service Management Code (PSMC) give an outline of the procedures to be followed for the dissemination of information regarding job vacancies.

<sup>17</sup> Available at: [www.um.edu.mt/hrmd/services/recruitment](http://www.um.edu.mt/hrmd/services/recruitment)



Do institutions in the country currently have policies to ...?	Yes/No	Description
		available online, but the names of selection panel members are not published.
– <b>publish the selection criteria together with job advert</b>	No	<ul style="list-style-type: none"> <li>– The University of Malta does not publish the selection criteria together with job adverts on its website;</li> <li>– The Public Service has clear rules for the formulation of selection criteria, but these are not generally made public. The selection criteria are proposed by the head of department prior to the publication of the call for applications and are approved by the PSC.</li> </ul>
– <b>regulate a minimum time period between vacancy publication and the deadline for applying</b>	Yes	<ul style="list-style-type: none"> <li>– The University of Malta establishes a minimum time period between vacancy publication and the deadline for applying according to its internal regulations.</li> <li>– The Public Service establishes a minimum time period of fifteen (15) working days. In the case of the Public Sector, the minimum time period is established by internal regulations.</li> </ul>
– <b>place the burden of proof on the employer to prove that the recruitment procedure was open and transparent</b>	Yes	<ul style="list-style-type: none"> <li>– The University of Malta’s recruitment procedure is open and transparent and, therefore, the applicant may seek written clarification of a selection outcome from the University within 10 days of the results being posted. If the applicant is still not satisfied, he/she may turn to the University Ombudsman<sup>18</sup>.</li> <li>– In the case of Public Service vacancies, heads of department are bound by the PSC Regulations. Regulation 12 stipulates that vacancies are to be filled according to the overriding principles of merit and open and transparent competition. In the exercise of their duties, heads of department are subject to the scrutiny of the PSC, which ensures that such principles are adhered to.</li> </ul>
– <b>offer applicants the right to receive adequate feedback</b>	Yes	<ul style="list-style-type: none"> <li>– The University of Malta’s recruitment procedure offers applicants the facility to request feedback.</li> <li>– Applicants may request a breakdown of the marks they were awarded under the various assessment criteria and sub-criteria.</li> </ul>
– <b>offer applicants the right to appeal</b>	Yes	Candidates have the right to appeal the decision of the selection board.

Source: Deloitte

### EURAXESS Services Network

Information on entry conditions, transfer of social security and pension contributions, accommodation and administrative assistance is generally available on relevant Government websites. The EURAXESS national portal also includes links to relevant web pages.

Researcher positions at the University of Malta are published online on the University’s website. Academic posts (approximately one third are dedicated to research activity) are also advertised on the University of Malta website; they are also accessible via the EURAXESS Jobs portal.

Research positions in other publicly funded institutions are also published online on the website of Malta’s public employment agency, the Employment and Training Corporation ([www.etc.gov.mt](http://www.etc.gov.mt)) and on the Department of Information website ([www.doi.gov.mt](http://www.doi.gov.mt)) and in the Government Gazette.

## 5. Education and training

### Measures to attract and train people to become researchers

The table below summarises key policy measures implemented to increase the number of researchers.

<sup>18</sup> See Guidelines as issued by University Council: [www.um.edu.mt/hrmd/services/recruitment](http://www.um.edu.mt/hrmd/services/recruitment)

Table 4: Human Resources - Key programmes and initiatives

Measure	Description
<b>Malta Government Scholarship Scheme (MGSS) (2006 - ongoing)</b>	The Malta Government Scholarship Scheme provides scholarships to individuals wishing to pursue undergraduate or postgraduate studies both in Malta as well as overseas. The source of funding is national. It is expected that this scheme will continue for the foreseeable future. A total of 397 scholarships for post-graduate studies were awarded between 2006 and 2013 (193 of which were for Doctoral studies). In order to encourage a greater uptake of scholarships in STEM subjects, scholarships for areas of study in science have a more attractive financial package.
<b>Master It! (2013-2015)</b>	In 2013, the STEPS scheme was replaced by another ESF co-funded scheme called Master it! A total of 464 scholarships were awarded at Masters level during the first two calls. A total of 198 scholarships were awarded in STEM subjects. In April 2014, the third Call was launched.  These scholarships aim to support graduates to follow post-graduate studies, at Master level, both in Malta and abroad.
<b>National Interactive Science Centre (planned)</b>	The Government is currently developing and implementing Malta's first National Interactive Science Centre (NISC). Work started in 2010 and the NISC is due to open its doors in 2015. The main goal of the NISC is to bring science closer to the general public and aid in increasing the take-up of science subjects at secondary level through a novel way of presenting science. The NISC project is co-financed by the European Regional Development Fund (ERDF).
<b>National Research and Innovation Programme (2004 - onwards)</b>	The National Research and Innovation Programme provides grants <sup>19</sup> to academia and industry working together, to fund research projects. Academics who obtain funds through this programme regularly employ research officers who often work towards obtaining their doctorate.
<b>Researchers' Night (annually)</b>	Malta has on many occasions organised 'Researchers' Night' events providing interactive science entertainment for children and the general public. A number of discussions aim to engage youths and adults in subjects such as human behaviour and the mysteries of the human mind, saving money while saving energy and the planet, or applying science to creativity. Researchers set out the topic for discussion and the public is encouraged to question and debate with the scientists in several Science Cafés.
<b>Science Centre (ongoing)</b>	The Government maintains a Science Centre for science education within primary and secondary levels. The Science Centre, within the Ministry for Education, hosts the Assistant Director responsible for science and education officers responsible for Biology, Chemistry, Physics, Integrated Science and Primary Science. It also serves as the meeting place for peripatetic teachers who are involved with primary school science teaching. The Centre provides science resources and equipment for loan to primary schools. The Science Centre coordinates regular professional training courses/sessions for secondary science teachers and primary teachers.
<b>Science Festivals (annually) (2009-2010)</b>	Science festivals for the general public and related promotional activities were held intermittently between 1988 and 2008. In 2009 and 2010, the government organised larger scale science festivals as well as other events (such as mini-festivals in specific localities) through the European Social Fund funding support. The National Interactive Science Centre is a follow-up to the Science Festivals which ended in 2010.
<b>Strategic Educational Pathways Scholarships (STEPS) Scheme (2009-2012)</b>	The Strategic Educational Pathways Scholarships Scheme provided scholarships to individuals wishing to pursue postgraduate studies, both in Malta as well as overseas. It was funded through the EU Structural Funds (the European Social Fund) for the financial period 2007-13. A total of 886 scholarships were awarded at Master and Doctoral levels. A total of 38 scholarships at doctoral level were awarded in STEM subjects, out of a total of 82 doctoral scholarships awarded. 220 scholarships were awarded in this area at Masters level.
<b>University of Malta Trust Fund (2011)</b>	The University of Malta endeavours to provide junior academic staff (assistant lecturers) with the opportunity and with assistance to obtain a PhD. Obtaining a doctorate is a prerequisite to promotion to the grade of lecturer and to further

<sup>19</sup> Examples of grants are available at: <http://www.mcst.gov.mt/national-funding/ri-programme/funded-ri-projects>, The size of the grants awarded ranges between EUR 50 000 and EUR 200 000.

Measure	Description
	promotion. In 2011, the University of Malta Trust Fund was created with the injection of EUR 0.5 million of government funds to fund research, development and innovation. Once fully operational, it is expected to contribute to the creation of researcher positions as well as an increase in the number of researchers.

Source: Deloitte

### Doctoral graduates by gender

The table below shows the number of doctoral graduates in Malta by gender as a ratio of the total population.

Table 5: Doctoral graduates by gender

Indicator	Malta	EU Average
<b>New doctoral graduates (ISCED 6) per 1 000 population aged 25-34 (2011)</b>	0.3	1.7
<b>Graduates (ISCED 6) per 1 000 of the female population aged 25-34 (2011)</b>	0.1	1.6
<b>Graduates (ISCED 6) per 1 000 of the male population aged 25-34 (2011)</b>	0.5	1.8

Source: Deloitte

Data: Eurostat

### Funding of doctoral candidates

The table below presents the two different funding paths accessible to Maltese doctoral candidates.

Table 6: Funding opportunities for doctoral candidates<sup>20</sup>

Funding scheme	Description
<b>Fellowships</b>	In Malta, the number of funded doctoral candidates was 215 (68%) while 103 (32%) were unfunded. The four categories of funding are: <ol style="list-style-type: none"> <li>1. Funding from a Maltese institution: the MGSS and STEPS programmes;</li> <li>2. Scholarships and grants from abroad;</li> <li>3. Teaching or research assistantship;</li> <li>4. Employer assistance.</li> </ol>
<b>Employment contracts</b>	In Malta, it is estimated that 8-9% of doctoral candidates obtain their doctorate based on having signed an employment contract (e.g. research assistantships or employment with the University of Malta).

Source: Deloitte

### Measures to increase the quality of doctoral training

The Maltese Government has not put in place any measures to increase the quality of doctoral training.

### Skills agenda for researchers

The Maltese government has not developed a specific Skills' Agenda. However, the University of Malta is participating in a European Social Fund project that will result in offering a Masters' course in entrepreneurship as well as in establishing a Business Incubation Centre at the University of Malta. The Centre for Entrepreneurship and Business Incubation (CEBI) was set up in May 2013 as a centre of excellence in entrepreneurship at the University of Malta (UoM), complementing the existing endeavours in the area. CEBI will catalyse the development of a vibrant, indigenous, knowledge-intensive entrepreneurial sector targeting science, technology, engineering, media and the creative industries in Malta. As an academic centre, CEBI trains students and staff in the science and art of entrepreneurship using a participant-centred, hands-on approach, by leveraging entrepreneurship expertise at the University of Malta as well as seasoned local and foreign entrepreneurs. CEBI also plans to catalyse the creation of start-up, seed and venture capital funds to launch and grow a new breed of successful, knowledge-intensive ventures. The CEBI board of directors is also involved in overseeing the strategic development of TAKEOFF, the University Business Incubator which was launched in April 2014 with the aim of incubating new knowledge-based start-up companies.

In July 2013, CEBI launched an Intensive Training Programme in entrepreneurship, in collaboration with Isis Innovation. The development of this programme has been supported through the European Social Fund project. A total of around 50 students are following the Programme.

<sup>20</sup> Estimates are based on 2008-2009 data. More recent data are not available.

Isis and local lecturers are delivering the study units, which have been designed to transform science, technology, engineering and media graduates into successful knowledge-based entrepreneurs and intrapreneurs. An innovative aspect of the Intensive Training Programme is that qualified students will be able to utilise the credits for the study units, which are offered at NQF level 7 (Masters Level), towards the award of a Master in Entrepreneurship.

The new National R&I Strategy 2020 takes this objective into consideration, focusing mainly on the importance of nurturing a researcher pool with awareness, expertise and experience in both the academic and the business camps, which benefits both the individual's career path as well as further industry development. In addition, the Strategy also emphasises the importance of coupling the drive towards increasing the number of doctoral and post-doctoral graduates with a drive to attract research initiatives to Malta to provide career opportunities for new researchers.

## 6. Working conditions

### Measures to improve researchers' funding opportunities

The Malta Council for Science and Technology (MCST) is the National Contact Point organisation offering information and free tailored consultation on Horizon 2020. National Contact Points at MCST offer one-to-one meetings and guidance on funding opportunities throughout all administrative stages of the application, submission and project implementation.

See also chapter 5 "Education and training" for information on other programmes and schemes aimed at improving researchers' funding opportunities.

### Remuneration

The University of Malta has, until now had few positions for full-time researchers and the organisation was based predominantly on academic positions. However, the 2009 Collective Agreement<sup>21</sup> introduced the concept of a research stream into the hierarchy, with the creation of posts for full-time researchers. These posts are not permanent positions, but based on a defined term contract. This Collective Agreement also introduced opportunities for full-time academic staff to avail themselves of sabbatical leaves, which may be dedicated to research or other activities.

For further information, see the country profile on remuneration of researchers from the MORE2 study on the EURAXESS website.<sup>22</sup>

### Researchers' Statute

The Maltese Government does not provide a 'statute' or equivalent for researchers.

### The European Charter for Researchers' & the 'Code of Conduct for the Recruitment of Researchers'

The Maltese Government has not yet actively promoted the implementation of the 'Charter & Code' by research institutions and funders. It is in the process of identifying measures to promote its adoption. However, many of the provisions of the 'Charter & Code' are being implemented by the institutions. The new National R&I Strategy 2020 refers explicitly to the Charter and Code and recommends their adoption by public employers and funders of researchers.

### Autonomy of institutions

Malta has only one public University, the University of Malta. The University of Malta enjoys the required autonomy to establish its preferred profiles and the associated remuneration levels of the academic staff. However, the funding of the University of Malta is predominantly based on government funding, which imposes a degree of limitation on the numbers and remuneration levels of the academic staff, including researchers.

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<sup>21</sup> 2009 Collective Agreement for Academic Staff

<sup>22</sup> <http://ec.europa.eu/euraxess/index.cfm/services/researchPolicies>

The Maltese Government provides autonomy to the rest of the institutions to allow for a differentiation of researchers' salaries. However, in practice, salaries of academic staff and researchers are linked to the job grade, with prospects of promotion based on the number of publications, citations and so on.

### Career development

The University of Malta has developed a career stream for researchers. In addition, academic members of staff have a clear career progression from assistant lecturer all the way up to professor level, and they are contractually bound to undertake research activities for one third of their time.

### Shift from core to project-based funding

In Malta, the shift from core to project-based (short-term) research funding does not have an impact on researchers' working conditions.

### Social security benefits (sickness, unemployment, and old-age)

In Malta, all publicly funded fellowships, stipends, grants or equivalent provide sickness benefits (for temporary illness) for researchers in the case for normal employment as defined and ruled by the 'Employment and Industrial Relations Act' and related legislation.

The grant schemes (MGSS, STEPS and Master it!) provide funding for the beneficiary to enrol at a University as a student for a limited period (normally for a maximum of three years). However, they do not include explicit provision for contribution to social security (including unemployment and old-age benefits). Scholarship awardees are offered a maintenance grant, a 'study abroad' allowance and family friendly allowances. They are also offered the opportunity to work up to 19 hours per week.

Any unemployment benefits that a researcher qualifies for would depend on employment history rather than on the grant scheme.

## 7. Collaboration between academia and industry

The following table summarises programmes designed to boost collaboration between academia and industry, and to foster doctoral training in cooperation with industry.

Table 7: Collaboration between academia and industry

Measure	Description
<b>Loan of Highly Qualified Personnel' Scheme (2009-ongoing)</b>	Malta Enterprise operates a 'Loan of Highly Qualified Personnel' Scheme, which provides SMEs with a cash grant to hire specialised personnel temporarily. Such personnel would typically come from the academic sector. SMEs can benefit from taking on a highly qualified expert temporarily to work on R&D&I projects. In this way, SMEs can access new knowledge and increased innovation capabilities. The expert helps the SMEs carry out Industrial Research and Experimental Development Projects. Malta Enterprise <sup>23</sup> can provide part-financing of the costs directly related to the secondment of highly qualified personnel from a research organisation or large enterprise. These costs may consist of wages paid by the SME to seconded personnel or fees charged by the research institute or large undertaking for such a secondment. This scheme has been extended to June 2014. As with other incentives, it is currently under review in anticipation of new State Aid guidelines.
<b>Malta's National Research &amp; Innovation Strategy 2020</b>	The new National R&I Strategy 2020 retains a strong business orientation and emphasises the importance of strengthening linkages between the academic and the private sector for effective knowledge transfer.
<b>National Research and Innovation Programme (2013 – ongoing)</b>	The Malta Council for Science and Technology provides state financing in the form of grants for research, development and innovation in science and technology through the National R&I Programme which was set up in 2004. The National Research and Innovation Programme has as one of its eligibility conditions that proposals may only be submitted by consortia involving both academia and an industry partner, leading to better links between these two sectors. This requirement has been in place since

<sup>23</sup> 'Malta Enterprise' is the agency responsible for the promotion of foreign investment and industrial development in Malta. Malta Enterprise also provides support to industry to participate in the FP through the FP7 Exploratory Award Scheme. This provides assistance, in the form of a grant to help SMEs develop project proposals for submission in reply to FP7 calls

Measure	Description
	2008. The focus of the programme is applied research and technology transfer between academia and industry, with a specific focus on the four priority sectors identified in the 2007-2010 National R&I Strategy, namely Environment & Energy Resources, ICT, Value-Added Manufacturing and Health & Biotechnology. As of 2013, the National R&I Programme was re-named as the Technology Development Programme.

Source: Deloitte

## 8. Mobility and international attractiveness

In 2011, the percentage of doctoral candidates (ISCED 6) with citizenship of another EU-27 Member State was 4.1% in Malta compared with 4.2% among the Innovation Union reference group and an EU average of 7.7%<sup>24</sup>. In the same year, the percentage of non-EU doctoral candidates as a percentage of all doctoral candidates was 1.4% in Malta compared with 5.2% among the Innovation Union reference group and an EU average of 24.2%<sup>25</sup>.

### Measures aimed at attracting and retaining 'leading' national, EU and third country researchers

The Maltese Government has not put in place any measures to attract and retain leading national, EU and third-country researchers.

#### Inward mobility (funding)

The Maltese government has fully implemented Council Directive 2005/71/EC on a specific procedure for admitting third-country nationals for the purposes of scientific research (the Scientific Visa Directive).

#### Outbound mobility

Academic staff at the University of Malta may avail themselves of a sabbatical to spend time as a researcher in another country.

The STEPS programme provided funding for doctoral candidates to pursue studies either in Malta or overseas. However, the objective of this programme was to increase the number of doctoral candidates and there are no specific mobility objectives. The same rationale applies for the Master It! Programme, which focuses on Master level studies.

The Malta Government Scholarship Scheme (MGSS Scheme) also allows awardees to pursue their studies abroad, in addition to supporting those students who opt to conduct part of their assignment at world-renowned research institutes. Sixty per cent of the awardees opt to study abroad.

#### Promotion of 'dual careers'

The Maltese Government does not actively promote policies/measures supporting researchers' dual careers.

#### Portability of national grants

In Malta, publicly funded grants under the National R&D Programme are not portable abroad; however, fellowships and scholarships under MGSS and STEPS, and more recently Master It!, are portable abroad.

#### Access to cross-border grants

Foreign researchers are eligible to participate in projects funded under the National R&I Programme, without, however, being eligible to receive funding.

<sup>24</sup> See Figure 1 "Key indicators – Malta"

<sup>25</sup> Ibid