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# Stairway to Excellence Country Report: Malta

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**Abstract**

In the frame of the Stairway to Excellence project, complex country analysis was performed for the EU MS that joined the EU since 2004, with the objective to assess and corroborate all the qualitative and quantitative data in drawing national/regional FP7 participation patterns, understand the push-pull factors for FP7/H2020 participation and the factors affecting the capacity to absorb cohesion policy funds. This report articulates analysis on selected aspects and country-tailored policy suggestions aiming to tackle the weaknesses identified in the analysis.

The report complements the complex qualitative/ quantitative analysis performed by the IPTS/KfG/S2E team. In order to avoid duplication and cover all the elements required for a sound analysis, the report builds on analytical framework developed by IPTS.

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## EXECUTIVE SUMMARY

Malta is the smallest EU state with a total land area of just over 300 square km. In 2014 its population stood at just over 425,000 inhabitants, equivalent to just 0.08% of the EU total population. GDP per capita in PPS was 86% of the EU average in 2014.

R&D expenditure in Malta has seen a strong positive trend in recent years, but in spite of this stood at just 0.85% of GDP compared to an EU average of 2.01% in 2013,

Recent years have seen a number of positive developments in the R&D landscape, with expenditure increasing from 0.53% of GDP in 2008 to 0.85% in 2013. In spite of this Malta still ranked twenty-first in the EU in terms of R&D intensity in 2013, and is still far from reaching its target target of 2% of GDP by 2020. The business enterprise sector is the largest R&D performer, accounting for 54% of GERD in 2013, followed by the higher education sector at 36% of GERD. Malta has only one public university, the University of Malta, which is the main research performer in the higher education sector and a key organisation in Malta in terms of research capacity. R&D expenditure by government and public research organisations is 9% of GERD and is one of the lowest in the EU. This is not surprising considering that Malta has only one public research organisation, the Malta Aquaculture Research Centre, which accounts for most of the research expenditure in the government sector.

Malta enjoys a simple and stable R&I governance structure centred around three public bodies having well-defined responsibilities and operating at a national level. R&I policy is guided by a multi-annual R&I strategy incorporating the national smart specialisation strategy developed on the basis of widespread consultation with stakeholders. A detailed R&I action plan which will complement the strategy is under development and is scheduled for completion in September 2015.

On the other hand political championing of R&I has always been rather weak and Malta lacks a parliamentary sub-committee or similar body with overarching responsibility for R&I. Although a steering group and core group were established in 2014 with the main objective of drafting the R&I action plan, these do not have a formal mandate and do not fulfil the function of a high-level R&I coordination unit.

ESIF governance is highly centralised with the Ministry for European Affairs being responsible for preparing the operational programmes (OPs) and for managing the ESIF programmes, including responsibility for administering the calls, evaluation of proposals and monitoring of progress. It is assisted in these functions by a number of ESIF Monitoring Committees.

With reference to the ESIF evaluation procedure, a single Project Selection Committee chaired by the head of the relevant managing authority evaluates all proposals related to a particular programme, and in the case of ERDF is responsible for assessing proposals on a diversity of themes ranging from R&I to environment to transport. Ad hoc experts may be invited to support the deliberations of the committee, but it is not clear how often this possibility is availed of. This setup can create a bottleneck and may occasionally lead to some delay in processing of proposals. The evaluation process follows many of the international peer review principles such as excellence, impartiality, confidentiality, and integrity. However, the programme regulations do not specify the composition of the selection committee or the qualifications necessary for eligibility to perform this role, and the members of this committee are appointed directly by the Parliamentary Cabinet. In spite of these shortcomings, however, beneficiaries did not express any major concerns with the evaluation process during interviews conducted as part of this study. One possible explanation for this is the high success rate of proposals.

During the previous programming period the managing authority regularly organised information events in conjunction with each call to guide potential beneficiaries regarding the regulations and guidelines for submission of proposals. Preparation of project proposals was facilitated through the

possibility of charging consultancy costs related to this activity to the project. Beneficiaries interviewed by the author reported that proposal preparation was relatively straightforward (for example, in comparison to the FP7 application procedure) and was not a cause for concern.

On the other hand, all beneficiaries interviewed criticised the high administrative workload in the implementation of the project, especially in relation to preparation of reimbursement claims. Management and control requirements for structural funds are part of a common set of rules applicable to all types of actions for all sectors, imposed by EU and national rules. In some instances, notably in the public and higher education sectors, the administrative burden could be handled through the allocation of appropriate human resources. In the case of private industry and of SMEs in particular, however, financial constraints and the lack of adequate administrative capacity proved to be a major obstacle.

Another common complaint voiced by beneficiaries was the lack of flexibility and the requirement to rigorously adhere to the original proposal during the project implementation. This is not always practical given the duration of the submission and implementation process, the rapid pace of technological change, and the uncertainties associated with R&D work. While it is understandable that changes to the planned project activities cannot be undertaken at the project leader's whim, it would be advantageous to have a mechanism whereby changes could be made following proper justification by the project leader and authorisation by the managing authority.

During the previous programming period (2006–2013) a significant allocation of ERDF and ESF funding was used to provide much-needed resources for R&I in Malta. Key initiatives included development of research infrastructure at the University of Malta (€17.6m), grant schemes for R&I in industry (€7.8m), national research infrastructure initiatives (part of total project cost of €20.0m) and a postgraduate scholarship scheme which also funded doctoral studies (€9.1m). However, structural funds were not used to finance academic research or to develop Public Research Organisations, despite a severe shortage of national funds in these areas. In general, there was a high level of complementarity between national and structural funding instruments with very little overlap in the various schemes.

The limited availability of national funding resulted in a high level of stakeholder interest in utilisation of structural funds for R&I, and all available funds were successfully committed. Availability of co-financing did not present any problems since such funding was provided up front by the Ministry for Finance.

During the previous programming period no real attempts were made at policy level to develop synergies between the various European and national funding programmes. SF, FP7 and national funding programmes operated completely independently of one another. Nevertheless, there were a few instances where synergies did develop, where different sources of funding were used by beneficiaries in loosely-coupled initiatives. An example of 'upstream sequential combination' can be found in the use of structural funds for capacity-building (e.g. developing University research labs, PhD grants), which is expected to improve the University's chances of participating in H2020 in coming years. Another more specific example of the 'parallel funding' type regards the Health Biotechnology Laboratory at the University of Malta, where ERDF funding was utilised for purchasing of gene-sequencing equipment while the University was also a partner in an FP7 project which prepared the way for integrating diverse European bio banks into an integrated European federated system.

The new programming period provides an opportunity for improving upon the previous one in the utilisation of ESIF funding for R&I. The Operational Programmes finalised in March 2015 mention the objective of developing synergies between different funding sources in the preamble, but fail to follow up such intentions with any concrete measures or metrics in later sections. The National R&I Strategy 2020 published in 2014 also makes a brief reference to the development of synergies between ESIF and other funding sources and proposes a few possible mechanisms to achieve this aim. However this document does not include any specific lines of action, and any planned

measures will only become clear once the rolling R&I action plan currently under development is finalised in September of 2015.

Industry-academia collaboration and commercialisation of research have been a policy imperative since the development of the first Maltese national strategy for R&I in 2007. While there are no instruments specifically designed to promote uptake of public sector research results, there are a number of initiatives which do support this activity. The Commercialisation Voucher Programme (part of the FUSION Programme) which was introduced in 2012 and is managed by the MCST finances a suite of activities related to commercialisation of research results including market research, IP checks and patent applications. The programme is open to both academia and to the private sector. More recently the TAKE-OFF Seed Fund (introduced in 2014) managed by the University of Malta provides funding for early-stage and start-up development to help develop promising ideas into commercial products and services. This initiative has been a great success and after only one year of operation, beneficiaries had succeeded in raising €0.5m of external funding to finance their continued growth. While the Fund is open to innovative start-ups from both within and outside the University, it can also be leveraged for commercialisation of University research. It also includes a 'proof of concept' award restricted to academic staff to assist them in commercialisation of research conducted at the University.

The main conclusions of the report are as follows:

1. During the 2007-2013 programming period, structural funds were successfully used for R&I in amounts which exceeded national funding levels;
2. Structural funds were used primarily for developing national infrastructure, for infrastructure in academia, for promoting industry R&I and for HR capacity-building;
3. Structural funds were not used for funding academic research or public sector research, despite very limited national funding in these areas;
4. All allocated structural funds were fully taken up, indicating that there are no issues of absorption capacity;
5. During the previous programming period, no real attempt was made to develop synergies between various national and EU funding (structural funds, FP7, national funds). A small number of weak synergies developed spontaneously rather than as a result of any design or planning on the part of policy-makers.
6. With reference to the new programming period 2014-2020, the concept of synergy is touched upon and established as an objective in both the National R&I Strategy 2020 as well as in the Operational Programmes. However the documents do not translate this objective into any specific targets or concrete measures, and there is a real fear that that in the absence of such targets, these intentions will fall between the cracks.

With reference to the new programming period 2014-2020, the following recommendations are being proposed with the objective of developing synergies between the various funding sources.

1. Establish a task force involving the three key policy-makers (MCST, Parliamentary Secretariat for EU Funds, Malta Enterprise) with the mandate to analyse and take decisions on what funding synergies can be developed in the short, medium and longer term.
2. The MCST should embed specific objectives and targets backed up by concrete measures for developing synergies in the Action Plan supporting the National R&I Strategy 2020, while the Parliamentary Secretariat for EU Funds should do the same in the ESIF Operational Programmes.

3. Serious consideration should be given to developing a scheme for funding H2020 proposals which achieved high scores but did not get funded (alternative funding). This will have the additional benefit of encouraging participation in H2020, as well as reducing the workload of the local evaluation teams.
4. Assess the possibility of developing ESIF schemes for exploiting the results of previous FP7 / H2020 projects (downstream sequential combination).

The report concludes with a number of recommendations having a broader context and a long-term perspective in order to address weaknesses in the existing R&I regime as follows:

1. The Parliamentary Secretariat for EU Funds should ensure proper involvement of relevant players in the ESIF OP development process.
2. The Parliamentary Secretariat for EU Funds together with the MCST should explore the possibility of utilising ESIF for funding academic R&I.
3. Due consideration should be given to the utilisation of ESIF funding for developing public research centres such as the Malta Aquaculture Research Centre, or research centres catering for Malta's distinctive characteristics e.g. in agriculture, in construction;
4. Due consideration should be given to the utilisation of ESIF funds for developing centres of excellence in selected S&T areas.
5. The Manufacturing Research Platform pilot project undertaken by the MCST should be followed up (most research in Malta relates to manufacturing) with similar projects leading to increased expertise, improved prospects for attracting FDI, increased competitiveness and prospects for economic growth.
6. The Parliamentary Secretariat for EU Funds, if necessary in conjunction with the EC, should seriously evaluate the possibility of relaxing ESIF administrative controls in the case of smaller projects, for example those having a budget not exceeding €1m.
7. The local managing authority should endeavour to the maximum extent possible to reduce bureaucracy, allow more flexibility during project implementation, and focus monitoring on result achieved rather than on the process of getting there.

## Acknowledgements

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# 1 INTRODUCTION

## Background of Stairway to excellence project

The European Commission Framework Programme (FP) for research and technology development has been vital in the development of European knowledge generation. However, there is considerable disparity across EU countries and regions in terms of FP participation and innovation performance.

Horizon 2020 will continue to provide funding on the basis of excellence, regardless of geographical location. However, it will also introduce novel measures for "spreading excellence and widening participation" by targeting low Research & Innovation (R&I) performing countries - most of whom are eligible for innovation funding under Cohesion Policy for the period 2014-2020.

In addition, the new regulations for ESIF aim to use funds more effectively to build regional/national excellence and capacities. By doing so, the key funding sources (ESIF and Horizon 2020) can complement one another along the entire innovation process.

## Objective of S2E

The Stairway to Excellence (S2E) project is centred on the provision of support to enhance the value of the key European Union (EU) funding sources for research, development and innovation: European Structural and Investment Funds and Horizon 2020 but also the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME), Erasmus+, Creative Europe, European Union Programme for Employment and Social Innovation ("EaSI") and the digital services part of the Connecting Europe Facility by actively promoting their combination. The S2E project is funded by the European Parliament and entrusted by DG-REGIO to JRC- IPTS and has two main objectives, namely:

- Providing of assistance to regions and countries that joined the EU since 2004 in closing the innovation gap, in order to promote excellence in all regions and EU countries;
- Stimulating the early and effective implementation of national and regional Smart Specialisation Strategies.

## Main purpose of the document

In the frame of the project, complex country analysis is performed for all 13 EU MS with the objective to assess and corroborate all the qualitative and quantitative data in drawing national/regional FP7 participation patterns, understand the push-pull factors for FP7 participation and the factors affecting the capacity to absorb cohesion policy funds. This report articulates analysis on selected aspects and country-tailored policy suggestions aiming to tackle the weaknesses identified in the analysis.

The report complements the complex qualitative/ quantitative analysis performed the IPTS/KfG/S2E team. In order to avoid duplication and cover all the elements required for a sound analysis, the report builds on analytical framework developed by IPTS.

## 2 QUALITY OF THE GOVERNANCE

### Introduction

Malta is the smallest EU state with a total land area of just over 300 square km. In 2014 its population was just over 425,000 inhabitants, equivalent to just 0.08% of the EU total population. GDP per capita in PPS was 86% of the EU average in 2014 (Eurostat, June 2015).

### R&I Governance

The R&I governance system is centred around three public bodies all operating at a national level. These are:

1. **Malta Council for Science and Technology (MCST)** ([www.mcst.gov.mt](http://www.mcst.gov.mt)). This is responsible for research and innovation strategy and policy, and for managing the FUSION Programme which is the main R&I funding programme based on national funds. The MCST is not authorised to manage funding schemes utilising ESIF funds. It was the national contact organisation for the EC framework programme for many years, but responsibility for this programme has now passed on to the Parliamentary Secretariat for EU Funds. The MCST is still performing a caretaker role until the Parliamentary Secretariat for EU Funds is able to take on this responsibility. The MCST has a workforce of about 35 individuals, and reports to the Parliamentary Secretary for Research, Innovation, Youth and Sport within the Ministry for Education and Employment.
2. **Malta Enterprise** ([www.maltaenterprise.com](http://www.maltaenterprise.com)). This is the national development agency and is responsible for the growth and development of the Maltese business sector. It operates a number of schemes promoting R&I in the private sector, utilising both national and ESIF funds. Malta Enterprise has a workforce of about 250 individuals and falls under the responsibility of the Ministry for the Economy, Investment and Small Business.
3. **Parliamentary Secretariat for EU Funds** ([eufunds.gov.mt](http://eufunds.gov.mt)) within the Ministry for European Affairs and Implementation of the Electoral Manifesto (MEAIM) is responsible for management of all EU funding programmes. It will be taking over as national contact organisation for the Horizon2020 Programme which was previously the responsibility of the MCST.

R&I policy is guided by a multi-annual R&I strategy (MCST, June 2014) incorporating the national smart specialisation strategy which was developed on the basis of widespread consultation with stakeholders. A detailed action plan is under development and is scheduled for completion in September 2015.

While both the Malta Council for Science and Technology (MCST) and Malta Enterprise possess the requisite R&I knowledge within their workforce, the EU Funding units depends on input from external organisations for such expertise.

The table below summarises the scope of responsibility of the three organisations.

Organisation	Policy responsibility	Administer national R&I funds	Administer ESIF Funds	Scope of responsibility	R&I expertise
MCST	National R&I Strategy / Smart Specialisation Strategy	yes	no	all sectors	yes
Malta Enterprise	Develop R&I schemes for industry	yes	yes	industry	yes
Parliamentary Secretariat EU Funds	ESIF operational programmes	no	yes	all sectors	no

**Table 2.1: Responsibilities of R&I governance bodies**

## ESIF Governance

ESIF governance is highly centralised within a single organisation operating at national level. The Parliamentary Secretariat for EU Funds is responsible for preparing the operational programmes (OPs) and for managing the ESIF programmes, including responsibility for issuing of calls, evaluation of proposals and monitoring of progress. It is assisted in its functions by four Monitoring Committees, one for each of the programmes ERDF/CF, ESF, EAFRD and EMFF.

The Parliamentary Secretariat for EU Funds comprises of the following divisions:

1. The Planning and Priorities Coordination Division (PPCD), which is the Managing Authority responsible for Structural and Cohesion Funds (ERDF/CF and ESF);
2. The Funds and Programmes Division (FPD), which is responsible for all other funds and programmes including the European Maritime and Fisheries Fund (EMFF), European Agricultural Fund for Rural Development (EAFRD), EU Territorial Programmes, EU Educational Programmes, etc.

The Operational Programmes (OPs) for the ERDF and ESF programmes were developed by the Ministry for European Affairs (MEAIM) with the help of sectoral sub-committees and with the participation of relevant policy-makers and stakeholders. However, interviews conducted by the author with some of these policy-makers indicated that they were not totally satisfied with their level of involvement in the consultation exercise. While they were asked to provide input during the initial stages of the OP development process, their involvement in later stages was inadequate in view of their policy mandate.

The National R&I Strategy and complementary action plan will depend heavily on the ESIF programmes as sources of funding for proposed activities. Ideally, the action plan should have been developed prior to or in parallel with the OPs in order to ensure a high level of coherence between these documents. Delays in the finalisation of the action plan may introduce constraints since R&I funding for different objectives has already been ring-fenced in the ESIF OPs.

## Synergies between FP7/H2020 and ESIF

In previous years there were no measures or instruments aimed at developing synergies between FP7 and other EU funding programmes.

Looking towards the future, the National R&I Strategy 2020 (MCST, June 2014) briefly addresses the objective of developing synergy between ESIF funds and the H2020 programme, and states the following:

*“opportunities for combining different funding sources will be explored and, where possible, exploited. Such opportunities may include, inter alia, the utilisation of national and European Structural and Investment Funds (ESIF) to build capacity and critical mass to better participate in Horizon 2020, the funding of above threshold proposals submitted under Horizon 2020, as well as the use of ESIF and national funds for the commercialisation of Horizon 2020 project outcomes.”*

However, the national strategy is a high-level document and does not include any specific measures promoting synergy. The strategy will be supplemented by a rolling R&I action plan which is currently under development and is scheduled for completion in September 2015. It is expected that any concrete measures for developing synergies between the various funding sources will be included in this document.

With reference to ESIF funding policy, Operational Programmes I and II (Ministry for European Affairs, March 2015) were approved by the EC in March 2015 and both include a brief reference to the objective of developing synergies between the ESIF and Horizon2020. However, this idea is not developed further and there are no specific details, instruments or metrics related to this objective within the documents.

## SWOT Analysis

One of the strengths of the R&I governance system in Malta is the simple and stable governance structure centred around three public bodies having well-defined responsibilities and operating at a national level. It also has a multi-annual R&I strategy incorporating its smart specialisation strategy developed on the basis of widespread consultation with stakeholders and is in the process of developing a rolling R&I action plan to complement the strategy.

R&I has shown a strong positive trend over the last five years, with R&D intensity increasing from 0.53% of GDP in 2008 to 0.85% in 2013. Structural funds were used to develop national and higher education research infrastructures, for promoting industry R&I and for funding doctoral students.

On the other hand, the Maltese R&I governance framework suffers from a number of weaknesses. Political championing of R&I has always been rather weak, and remains so despite the appointment of a Parliamentary Secretary for Research, Innovation, Youth and Sport in 2013.

The lack of a parliamentary sub-committee or similar body with overarching responsibility for R&I means that any interaction between the various public bodies relevant to R&I governance takes place on a voluntary basis rather than being institutionalised, and coordination may not always be at optimal levels. In 2014 an inter-ministerial structure (consisting of core group and steering group) was set up to oversee the development of the smart specialisation implementation plan under the stewardship of the Malta Council for Science and Technology. However, these two groups do not have a formal mandate and their link to the political level is rather tenuous.

Although sectoral strategies for manufacturing (MCST, Dec 2011) and Health (MCST, 2013) were published in recent years, these were not followed up by concrete action, thus eroding the credibility of the policy-making institutions.

National funding for R&I is very low, with a single funding programme branded FUSION (MCST, June 2014) which has an annual financial allocation of just €1.6m. There are no funding instruments dedicated to academic research.

Expenditure on public sector research is one of the lowest in the EU, and Malta has only one PRO, the Malta Aquaculture Research Centre. This has limited autonomy and lacks a specific research budget. The public centre in general has a very weak scientific culture.

A detailed SWOT analysis of the R&I governance in Malta may be found below.

### **Strengths**

- Simple and stable governance structure;
- Documented national R&I strategy and smart specialisation strategy;
- Strategy development process based on extensive consultation with stakeholders;
- Development of an R&I Action Plan underway;
- Positive developments in R&I intensity, capacity-building and funding schemes in recent years.

### **Weaknesses**

#### General

- Absence of strong political championing of national R&I strategy development;
- Absence of a parliamentary sub-committee or similar body with overarching responsibility for R&I;
- Lack of follow-up of thematic or sectoral strategies developed in previous years, e.g. manufacturing strategy, health strategy;
- Very weak level of interest by public sector – only one PRO operating in the aquaculture sector and no development plans despite aquaculture being identified as one of the areas in the RIS3;
- Low levels of public funding for R&I;
- Lack of evidence base, analytical studies, *ex-ante* and *ex-post* evaluation of policies;

#### ESIF

- ESIF managing organisations have limited knowledge and expertise of R&I ecosystem;
- Limited range of policy instruments e.g. ESIF funding not utilised for academic research;
- Lack of ongoing coordination with R&I policymakers;
- ESIF managing authority have ivory tower mentality;
- No initiatives to date to promote synergy between H2020 and ESIF.

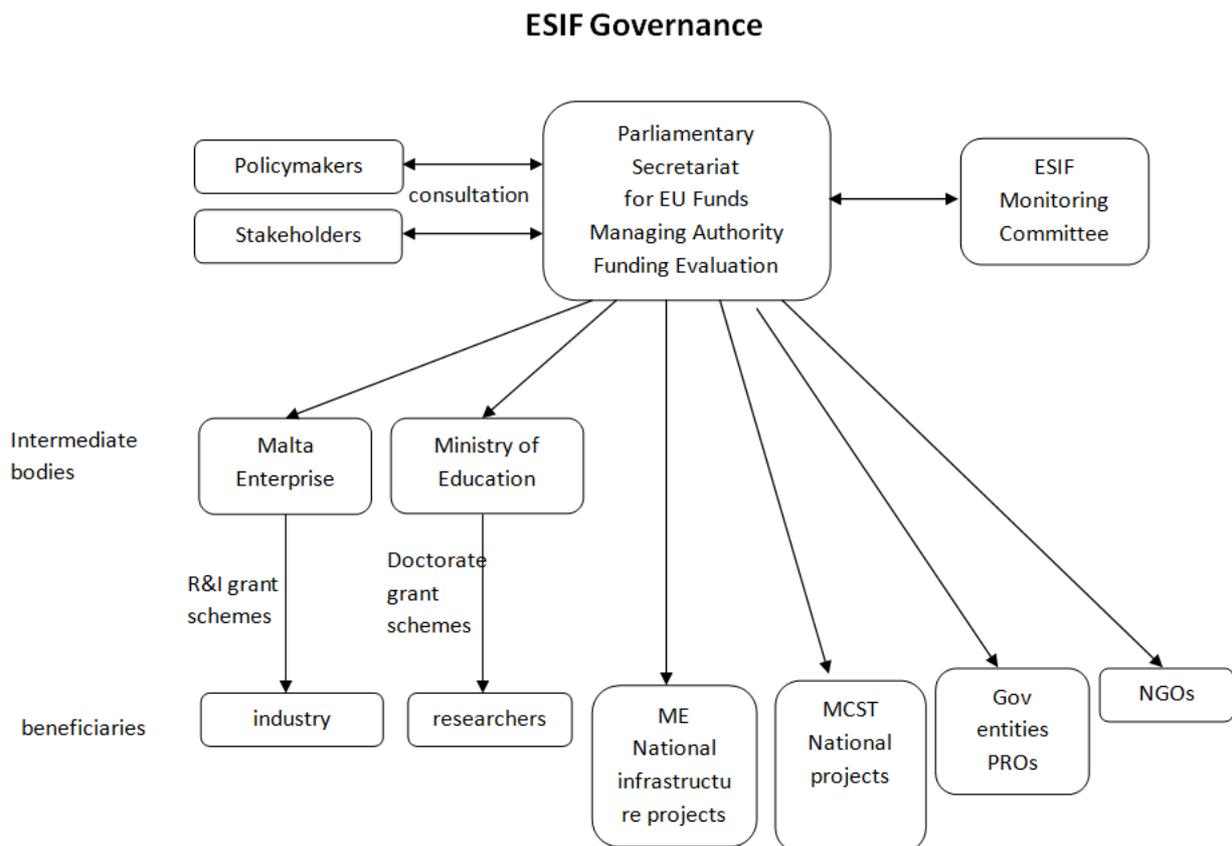
### **Opportunities**

- Malta's expertise in the aquaculture industry presents an opportunity for development of the only Maltese PRO;
- There is a need and an opportunity for developing public research capacity to cater for Malta's distinctive characteristics e.g. in agriculture, in construction;
- Manufacturing research platform pilot project could be followed up (most research in Malta relates to manufacturing) leading to increased expertise, a more attractive package for FDI, increased competitiveness, economic growth;
- Opportunity for MCST to take a lead in organising research initiatives in a number of sectors such as health;

- Significant investments in the University's infrastructure facilities in recent years constitute a solid foundation for further growth;
- Opportunity for developing action plans involving industry & academia, ME etc.

### Threats

- Failure to capitalise on recent investments and achievements could lead to waste of resources;
- Failure to maintain momentum in recent developments and improvements could stall progress and jeopardise the future.

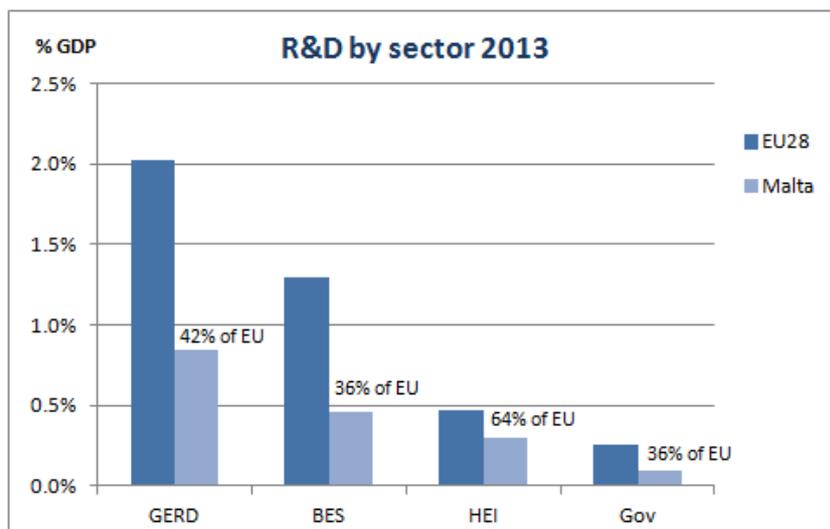


**Figure 2.1. Organogram – governance of R&D funds (including structural funds for R&D)**

### 3 FACTORS THAT SUPPORT OR LIMIT PARTICIPATION IN R&D CALLS FUNDED BY ESIF

#### R&D in Malta

R&D expenditure (GERD) in Malta has seen a strong positive trend in recent years, but in spite of this stood at just 0.85% of GDP compared to an EU average of 2.01% in 2013, ranking twenty-first in the EU in terms of R&D intensity. It has set an R&D target of 2% of GDP by 2020 (Eurostat, June 2015).



**Figure 3.1: R&D expenditure of the different sectors as % of GDP in 2013 (Eurostat June 2015)**

The business enterprise sector (BES) is the largest R&D performer, accounting for 54% of GERD in 2013. In 2012, 66% of business R&D expenditure was incurred by enterprises employing less than 250 employees, which is the third highest percentage in Europe (Eurostat, June 2015).

Malta has only one public university, the University of Malta, which is the main research performer in the higher education (HEI) sector. Higher education R&D stands at 64% of the corresponding EU average, while both the business and government sectors stand at just 36% of their corresponding EU figures.

R&D expenditure by government and public research organisations is 9% of GERD and is one of the lowest in the EU. This is not surprising considering that Malta has only one public research organisation, the Malta Aquaculture Research Centre, which accounts for most of the research expenditure.

## 2007-2013 Policy cycle

In 2006 Malta published its first R&I strategy (MCST, July 2006). The relevant institutions had no experience and limited knowledge of how ERDF and ESF could be used for R&I at the time, and the operational programmes were limited in detail as to what measures and instruments would be utilised.

Over the course of the programming period, preliminary ideas were developed further and project proposals were prepared. The University of Malta was successful in obtaining funding for its research infrastructure, purchasing of equipment and upgrading of laboratory facilities. Malta Enterprise obtained funding for two schemes for industry, one financing R&D (Malta Enterprise, February 2012) and another targeting innovation (Malta Enterprise, February 2012). Malta Enterprise was also successful in obtaining funding for construction of and equipping the Life Sciences Centre ([www.lifesciencespark.com](http://www.lifesciencespark.com)) and the Digital Hub (Investing in Your Future website, ERDF 331: The Development of a Digital Hub). The National Commission for Higher Education obtained funding for a postgraduate (including doctoral) scholarship scheme through the ESF programme (Ministry for Education and Employment. STEPS: Strategic Educational Pathways Scholarships website).

## Absorption of 2007-2013 Structural Funds

Malta has only one public university and only one PRO, resulting in lack of competition for structural funds and therefore high success rates in acceptance of proposals. Lack of alternative funding sources means that there was great interest in applying for funds, and all available funds were successfully committed.

Availability of co-financing was not an issue, since the Ministry of Finance allocated the necessary funding and public sector entities did not have to find the co-financing from their own financial allocation. In the case of NGOs, the government established a special fund through which it was possible to obtain the necessary co-funding.

Although administrative capacity to prepare proposals and manage projects was initially a challenge, over the course of the programming period most institutions successfully geared up for the task and this did not interfere with successful absorption of structural funds.

R&I schemes for industry managed by Malta Enterprise attracted sufficient applicants and all available funds were committed. However, during execution of the projects there were some savings and not all allocated funds were used as planned. Excess funds were reallocated and utilised for other R&I initiatives.

## Assessment of Policy Instruments

Official figures on the expenditure of structural funds for R&I purposes are not available, and R&I statistics compiled by the National Statistics Office do not include separate figures for such expenditure. The 2013 SF annual implementation report (MEAIM, June 2014) provides some indicative figures and states that just over €45m were committed to RTDI and ICT. The MEIAM website ([www.investinginyourfuture.gov.mt](http://www.investinginyourfuture.gov.mt)) provides details including finances on the individual projects, and this information has been used by the author in the analysis below.

The main R&I policy instruments developed under the 2006-2013 period can be categorised as follows:

- University of Malta research infrastructure initiatives – managed by the University itself;
- National research infrastructure initiatives – managed by Malta Enterprise;
- Industry R&I schemes – managed by Malta Enterprise;
- STEPS postgraduate scholarship scheme – managed by the Ministry for Education;
- Manufacturing Research Platform involving outsourcing of manufacturing research projects – managed by the Malta Council for Science and Technology.

Policy instrument	Commitment €m	Comment
ERDF: University of Malta research infrastructure initiatives	17.6	14 projects with individual allocation ranging from €0.4m to €4.3m.
ERDF: National research infrastructure initiatives	20.0	Life Sciences Centre - only a part of this qualifies as R&I expenditure.
ERDF: Industry R&I grant schemes	7.8	R&D Grant Scheme (€2.2m), Innovation Actions Grant Scheme (€5.6m).
ESF: STEPS scholarship scheme	9.1	Scholarship scheme for masters and doctoral studies
ERDF: Manufacturing Research Platform	0.6	Outsourcing of 3 manufacturing research projects

**Table 3.1: Utilisation of ERDF and ESF funding in 2006-2013 programming period**

While the structural funds were used in a variety of instruments, one shortcoming was the failure to utilise these funds to finance academic research. The MCST, which manages the national R&I funding programme, does not enjoy the status of intermediate body and was unable to use SF funds for this purpose. The Ministry for Education and Employment would be able to utilise such funds but does not consider the management of research funding schemes for academia as part of its remit.

Another criticism relates to the failure to make use of EC funds to develop Public Research Organisations. For example, Malta has a well-established PRO, the Malta Aquaculture Research Centre, which has the potential for development into a centre of excellence in this field. In spite of this, however, no attempt was made to utilise EU funding for this purpose, possibly since aquaculture was not identified as one of the thematic priorities in the national R&I strategy (MCST, July 2006). However, in recent years a national aquaculture strategy has been published (Ministry for Sustainable Development, June 2014) which advocates research in this area, and the operational programme for the European Maritime and Fisheries Fund (MEAIM, March 2015)

provides indications that funding will be allocated to this research centre (Ministry for Sustainable Development, June 2014).

### Complementarity of Funding Schemes

The table below summarises indicative annual funding availability through national funds and structural funds during the previous programming period. This shows that there is a high level of complementarity with very little overlap in funding.

Category	National funds annually	Structural funds annually	comment
General R&I	€1.6m	None	National R&I funding programme open to industry, academia, public sector
Academia research	€0.7m	None	Approximate annual allocation of 0.7m from University of Malta internal funds
Academia infrastructure	None	€2.5m	€17.6m averaged over 7-year period
Industry – research / innovation	None	€1.1m	€7.8m averaged over 7-year period
National infrastructure	None	€2.9m	€20m over 7-year period, although only part qualifies as R&D expenditure
PRO development	None	None	
Postgraduate studies	€0.9	€1.3	National funds include both undergraduate and postgraduate allocations.

**Table 3.2: Comparison of national and structural annual funding during the 2006-2013 programming period**

### Experience of Beneficiaries

Beneficiaries reported that the proposal stage was relatively straightforward and the workload involved was less than that involved in an FP7 application. The guidelines were clear and beneficiaries expressed only minor issues or concerns with the evaluation process.

On the other hand, all beneficiaries reported a very high administrative workload in the implementation of the project, especially in relation to preparation of reimbursement claims. Management and control requirements for SFs are part of a common set of rules applicable to all types of actions for all sectors, imposed by EU and national rules. In the case of the University of Malta, the negative impact of this was mitigated by virtue of the University's Projects Office and allocation of Project Officers to SF projects. In the case of private industry and of SMEs in particular, however, their lack of adequate administrative capacity proved to be a major headache.

Another common complaint was the lack of flexibility and the requirement to rigorously adhere to the original proposal during the project implementation.(based on interviews with R&I performers) This is not always practical given the duration of the submission / implementation process, the rapid pace of technological change, and the uncertainties of R&D work. For example, one beneficiary who was interviewed reported that during project implementation, equipment became available which was superior to and less expensive than that which had been specified in the proposal. Nevertheless, the programme regulations meant that it was not possible to purchase the newer equipment in place of that which had been specified in the proposal. While it is understandable that changes to the planned project activities cannot be undertaken at the project leader's whim, it would be advantageous to have a mechanism whereby changes could be made following proper justification by the project leader and authorisation by the managing authority.

Beneficiaries also commented on delays and difficulties arising from public procurement procedures. This is supported by the OPI Annual Implementation Report for 2013 (Ministry for European Affairs, June 2014) which states the following:

*Notwithstanding the experience acquired in the last years, public procurement remains a major bottleneck and takes a substantial toll on the implementation of the Programme. The centralisation of the procurement process, albeit providing quality assurance, inevitably causes delays to the implementation of the programme on the ground.*

Of particular interest is the Malta Enterprise R&F Grant Scheme funded through ERDF, which was the only instrument whereby private enterprise could benefit from SF funds for R&D. While this was an excellent initiative and provided a much-needed boost to funds available for promoting R&I in industry, beneficiaries complained about the administrative burden related to the structural funding programme. Apart from onerous reporting requirements for financial matters, other bureaucracy included the necessity for a detailed justification that new replacement employees were of the same calibre and competence as those who had left the company. Delayed reimbursements by the national authority were a major issue and one beneficiary who was interviewed reported that payments are still outstanding 2 years after the project came to an end.

## **2014-2020 Programming Period**

The new programming period provided an opportunity for improving upon the previous one, and the Partnership Agreement (Ministry for European Affairs, October 2014, pp 75) lists a number of 'lessons learned' which should be taken into consideration in the new cycle. However, this was a generic exercise and although there are some useful observations there was no specific reference to the utilisation of ESIF funds for R&I.

The National R&I Strategy 2020, which also incorporates the smart specialisation strategy, makes passing reference to the development of synergies between ESIF and other funding sources and mentions the possibility of funding of above threshold proposals submitted under Horizon 2020, as well as the use of ESIF and national funds for the commercialisation of Horizon 2020 project outcomes. The Steering / Core Group is working on an action plan scheduled for completion in September 2015 but at this point in time there is no information regarding such plans.

## 4 PUSH – PULL FACTORS FOR R&I PERFORMERS TO PARTICIPATE IN FP7/H2020

FP7 represented an important source of funding for Maltese organisations, which were allocated about €21m through the FP7 programme (EC JRC-IPTS, 2015) representing an average of €3m annually which exceeds the level of national public funding for R&I. In comparison, the Fusion programme which is the key source of national research funds, had a financial allocation of €1.6m in 2014 (<http://www.mcst.gov.mt/fusion-ri-programme>). The scarcity of local funding is a significant factor behind the interest in participating in FP7.

Participants in FP7 expressed a high level of satisfaction with the experience (MCST, January 2015). As key benefits of participation, they cited great networking opportunities, increased opportunities to join projects, commercial collaboration with overseas companies and changes in accounting and purchase management procedures.

As a general comment it can be said that there is a high level of awareness as well as a high level of interest to participate in the framework programme in academia and the public sector (MCST, January 2015). This is largely the result of several years of dedicated effort by the national contact organisation (MCST) through the organisation of numerous events and stakeholder meetings. In the private sector there is a mixed picture, with varying levels of awareness and interest.

### Analysis of Participation

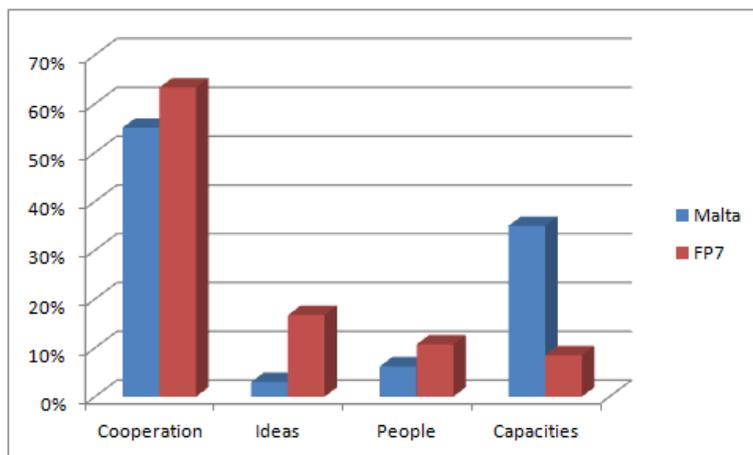
On a projects per capita basis, Malta has one of the highest levels of participation in the EU (MCST, 2015). However, the average funding received per project is very low with the result that funding per capita is €51, well below the EU average of €79 (EC JRC-IPTS, 2015).

Malta's participation pattern in FP7 is very different from the norm, as shown by the images below (EC JRC-IPTS, 2015). The graphs show the percentage distribution for Malta or for the whole of FP7 as the case may be. Careful interpretation is required since the figures do not provide a direct comparison between Malta and the other FP7 participants. For example, in Figure 4.1 the high percentage for Malta in the Capacities programme does not mean that it received more funding on a per capita basis than the FP7 average, but rather that it received a higher percentage of its total funding under this programme.

An important consideration is that due to the small size of the country, the total number of participations is very small (only 189), and the activities of a single organisation can cause a significant effect on the global figure. For example, the MCST accounts for about 44 participations, and the University of Malta accounts for 46.

#### 1. Financial contribution by programme

Figure 4.1 shows that the proportion of funding Malta received through the Capacities programme is four times the FP7 average, while that received through the Cooperation, Ideas and People programmes are all below the EU average. In particular, the proportion of funding through the Ideas programme is less than one-fifth of the FP7 average.



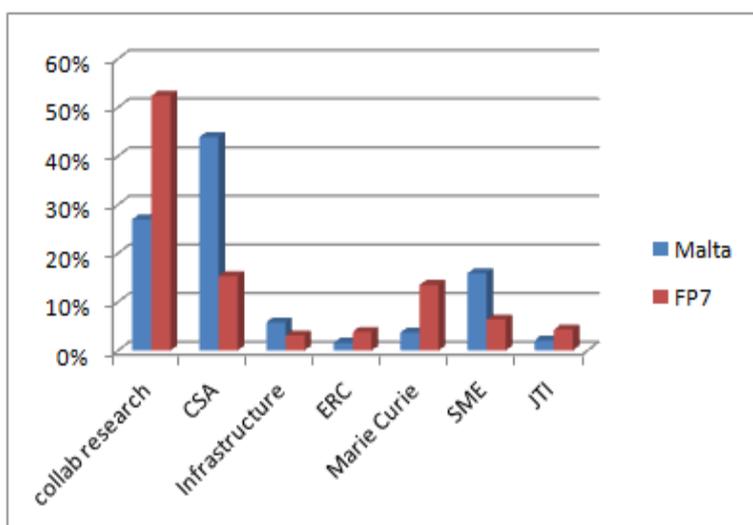
**Figure 4.1: Distribution of FP7 EU financial contribution among specific programmes**

The reasons for this are as follows:

- Cooperation Programme – Malta’s low level of GERD (0.85% GDP compared to 2.01% for EU in 2013) and limited research base constitute a barrier to participation in collaborative research projects which are the mainstay of this programme, negatively impacting participation levels. Nevertheless there were a number of participations by industry, by academia and by the public sector. The figure is also boosted by the number of NCP networking actions undertaken under this programme.
- Ideas Programme – this is the programme where Malta fared most poorly compared to the rest of the EU. The programme is aimed primarily at academia, and the University of Malta experienced difficulty in participating in this programme due to the absence of proper research teams at the University.
- People Programme – once again this programme is aimed mainly at academia, and the University of Malta found it difficult to attract overseas researchers to make use of the programme to conduct research in Malta. In fact most of the instances of participation in this programme relate to the Researchers Night support actions rather than to research projects.
- Capacities Programme – the relatively high level of participation in this programme is primarily the result of a high participation rate in the SME instrument (refer to more detail below).

## 2. Participation by instrument

Figure 4.2 shows that Malta has relatively high participation levels in projects based on the CSA, SME and Infrastructure instruments, with relatively low participation in collaborative research, ERC and Marie Curie actions.



**Figure 4.2: Distribution of FP7 participations by funding instrument**

The reasons for this are as follows:

- Collaborative research projects – as explained above, the limited research activity in Malta acts as a barrier to participation in collaborative research projects by Maltese entities.
- CSAs – the high proportion of collaboration and support action projects include the NCP networking projects, science in society, researchers night and international cooperation. Due to the small number of Maltese participations in FP7, such projects have a disproportionate impact on participation patterns.
- Infrastructure – despite the lack of national research infrastructures and of related national funding, the University of Malta participated in a limited number of projects in this category.
- ERC – refer to earlier comment on the Ideas programme.
- Marie Curie - refer to earlier comment on the People programme.
- SME instrument - 66% of R&D activity in Malta is conducted by enterprises employing not more than 249 employees, which is one of the highest percentages in Europe (Eurostat, June 2015). Consequently, a high level of industry participation in FP7 is through the SME instrument rather than in collaborative research projects.

### **Push-pull factors - Public Research Organisations**

A severe lack of research capacity in the public sector constitutes the main barrier to higher levels of participation in the framework programme. Malta has only one small PRO with just a handful of researchers, and government expenditure on R&D is the lowest in the EU, standing at just 0.09% of GDP in 2013 compared to an EU average of 0.25% (Eurostat, 2015).

Most of the instances (63%) of participation in FP7 by the public sector involve the MCST, which as the national contact organisation participated in numerous NCP-related coordination and support actions. The MCST also has a track record of participation in foresight and policy-related projects.

Malta's only PRO, the Malta Aquaculture Research Centre, was quite successful in FP7 and participated in 2 projects despite being a very small organisation. Other public sector entities sometimes get invited to join project proposals with relatively little or no effort from their side, sometimes on the basis of their institutional responsibilities.

In the public sector bureaucratic barriers to recruit additional staff to work on projects means additional workload for the participant combined with lack of recognition and acts as a disincentive. Lack of institutional support and administrative tasks are another issue.

### **Push-pull factors - Academia**

The University of Malta is the only participant from the higher education sector and is the organisation with the highest number of participations in FP7 in Malta.

Academics often get invited to join project proposals through their contacts with overseas researchers, on the basis of their track record and list of publications. Academics are in general eager and incentivised to participate in the framework programme. Although it results in additional workload, it provides much-needed funding for research activity and academics also benefit from the possibility of recruiting researchers on a fixed-term contract to work on a project. They are also offered the required administrative support by the University's project support office.

The University had a broad base of participation in most of the thematic areas within the Cooperation programme. Recent investments in research infrastructure funded through structural funds should improve the chances of University departments to participate in collaborative research projects in H2020.

However, the University experienced great difficulty to participate in the Ideas programme due to the absence of established research teams resulting from dire lack of national funding. Similarly, this lack of research capacity coupled with a limited international profile impacted its chances of participation in the People programme.

### **Push-pull factors - Private Sector**

In general the low level of research activity and limited research excellence in the private sector limits the possibilities for participation in FP7, especially in collaborative research projects.

In 2013 business expenditure on R&D in Malta stood at 0.46% of GDP compared to 1.28% across the EU. In 2012, 66% of business R&D expenditure was incurred by enterprises employing not more than 249 employees and is the third highest in Europe (Eurostat, June 2015).

## **5 POLICY INSTRUMENTS FACILITATING THE PARTICIPATION IN FP7 / H2020 / ESIF**

### **FP7 and Horizon2020**

In 2007 Malta Enterprise launched the Exploratory Award scheme, which provided cash grants of up to €10,000 to SMEs to assist in the preparation and submission of proposals under the FP7 and CIP programmes (EC, JRC, Erawatch website). However, this scheme was discontinued in 2013 and has not been replaced. The grant covered 60% of eligible costs which include personnel costs, technical consultancy fees, search for partners and travel to consortium-building activities. It could be utilised for proposals in a range of sectors including ICT, manufacturing, waste treatment, environment solutions and biotechnology. It is not clear to what extent this scheme was availed of and whether it was successful in promoting participation in FP7 and if so to what degree.

The Malta Council for Science and Technology operates the Brokerage Events Support Scheme which awards grants to individuals or organisations to attend overseas FP7 networking events with the objective of becoming involved in FP7 proposals. The scheme covers the cost of the flight together with a financial contribution towards accommodation and subsistence. The scheme has a very limited budget and only one application per individual, organisation or academic department was allowed. No information is available on the effectiveness of this scheme.

A survey undertaken by the MCST in 2014 revealed that participation in brokerage events abroad is high on the list of support measures requested by local organisations interested in participating in FP7 / H2020 (MCST, Jan 2015). Support for preparation of project proposals was also identified as a desirable measure, although at a lower priority level.

The survey respondents also asked for more targeted support from the NCP organisation. As national contact organisation for FP7, the MCST organised information sessions and other events to promote the programme on an ongoing basis. Presumably the survey respondents were asking for further help in identifying appropriate calls, finding partners and preparing proposals. However, it is generally acknowledged that such services are not the remit of the NCP but would normally be supplied by expert consultants.

The national R&I strategy (MCST, June 2014) does not address the subject of facilitating participation in the framework programme.

### **ESIF**

During the previous programming period the PPCD regularly organised information events in conjunction with each call to guide potential beneficiaries regarding the regulations and guidelines for submission of proposals. It is expected that such events will once again be organised once the new ESIF programme gets underway.

In terms of financial assistance for the preparation of proposals, consultancy costs can be charged to the project subject to a number of conditions such as following public procurement procedures and cohesion policy publicity requirements when selecting the consultant (Ministry for European Affairs, May 2009).

Apart from this measure, there are no policy instruments facilitating preparation of proposals for ESIF. However, this is not generally considered to be a problem since preparation of an ESIF proposal generally involved much less work than an FP7/H2020 proposal for a number of reasons. For example, the proposal is much less detailed, and proposals are normally submitted by a single partner rather than by a consortium thus requiring less coordination.

## 6 EVALUATION AND MONITORING MECHANISMS

### Process

Due to the relatively small scale of operations and limited number of beneficiaries and proposals, the evaluation process is handled internally by the Managing Authority.

Eligibility and selection criteria are defined beforehand, and include items such as contribution to the programme objectives, project sustainability, quality of the proposal and contribution to horizontal issues.

There is one Project Selection Committee for each programme, and this committee evaluates all proposals related to that programme. The committee consists of 4 members, with the head of the relevant Managing Authority acting as Chair. The programme regulations do not specify the composition of the selection committee or the qualifications necessary for eligibility to perform this role, and the other three members of this committee are appointed by the Parliamentary Cabinet. A single evaluation committee is thus responsible for evaluation of proposals on a diversity of themes ranging from R&I to environment to transport. *Ad hoc* experts may be invited to support the deliberations of the committee, but it is not clear how often this possibility is availed of. The results of the evaluation are then submitted to the relevant Monitoring Committee for review and approval. This consists of about 40 members with delegates from the EC, line ministries, etc.

The OPI Annual Implementation Report for 2013 states that the selection process is very time-consuming and indeed is one of the major challenges facing the Maltese administration in the implementation of the ESIF programmes (Ministry for European Affairs, June 2014). It states as follows:

*The selection process is a time-consuming procedure often compounded by the fragmentation of submitted proposals. Most of the delays in the process are related to the quality of submissions received, which inevitably lead to delays in the evaluation. Moreover, considering that submissions must be compliant with community legislations and must obtain clearance from SAMB, delays in the selections process are also linked to procedural issues linked to the process.*

### Assessment

The evaluation process follows many of the international peer review principles such as excellence, impartiality, confidentiality, integrity, etc. However, it is open to criticism on the grounds of the composition of the evaluation team and the transparency of the process for selection of evaluators. For one thing the evaluation team fails to include any international reviewers, and the managing authority is not receptive to such an idea since it is of the opinion that foreign evaluators would lack a proper understanding of the local scenario. On a more negative side, the same individuals are required to evaluate proposals on a broad range of topics thus calling into question their technical competence to do so.

Another criticism is that there is no proper schedule of calls, and beneficiaries do not have good visibility of forthcoming opportunities.

In spite of these shortcomings, however, beneficiaries did not express any major concerns with the evaluation process during interviews undertaken by the author. A small number of beneficiaries did express reservations regarding the limited subject-matter expertise of the evaluators.

A contributing factor to the general satisfaction with the evaluation process is probably the low levels of competition and high success rate of proposals, since in most instances there is only one potential beneficiary in each particular call category. For example, in calls related to funding for industry the only possible applicant would be Malta Enterprise.

One area where there may be a high level of competition for funds would be that related to the remit of the local councils. However this is not relevant to the field of R&I.

## 7 ENHANCING OR LIMITING THE SYNERGIES?

### 2007-2013 Programming Period

During this programming period no attempts were made to develop synergies between the various European and national funding programmes. ERDF/ESF, FP7 and national funding programmes operated completely independently of each other

Local regulations also stipulated that ERDF funds could not be used to fund parts of projects, but that each project proposed for funding must be complete in its own right (Ministry for European Affairs, May 2009). This rules out the use of structural funds for achieving certain types of synergy (simultaneous / cumulative funding) where funds from multiple sources are used to finance a single project.

The necessity to avoid double funding may also act as a disincentive to beneficiaries contemplating the use of multiple R&I funding sources because of the difficulty of clearly demonstrating the absence of double funding in related projects. Local authorities rigorously (and rightly) guard against the possibility of double funding through the Inter Ministerial Coordination Committee (IMCC) which includes delegates from the different funding agencies and conducts checks for this purpose.

The lack of a schedule of forthcoming ERDF/ESF calls also contributed to the difficulty of achieving certain types of synergy where success might depend on obtaining simultaneous funding from two sources.

In spite of the lack of any policy measures to utilise public funding from different sources towards the same objective, there were a few instances where such synergies did develop spontaneously. Assessing the previous programming period with respect to the different possible types of joint funding, the following conclusions can be drawn:

1. **Upstream sequential combination:** a significant proportion of ERDF and SF funding was utilised for capacity-building (e.g. developing University research labs, PhD grants) and these initiatives can be expected to improve the chances of participating in H2020 in coming years, and therefore introducing some element of synergy between the various funds.
2. **Downstream sequential combination:** there is a possibility that one or more of the projects funded through the ERDF R&I Grant Scheme for industry built upon work which had previously been undertaken through FP7, although no such cases have been identified. Any such synergy would be incidental rather than intentional.
3. **Parallel funding (different projects):** there are a few instances of such synergy, but once again these were incidental rather than by design. This can easily happen in projects of a capacity-building nature since the project objectives can be quite broad and projects do not need to be closely-coupled, as would be the case in research projects. One such example is the case of the Health Biotechnology Laboratory at the University of Malta, which benefitted from ERDF funding for purchasing of gene-sequencing equipment. The University was also a partner in the FP7 BBMRI project which prepared the way for integrating diverse European bio banks into an integrated European federated system.

4. **Alternative funding:** there are no known instances of R&I proposals positively evaluated (but not selected for funding) under FP7 which were subsequently funded under local schemes. The possibility of developing such schemes is mentioned in the national R&I strategy, but there are no such instruments to date.
5. **Simultaneous / cumulative funding:** there are no k instances of R&I initiatives being jointly funded by ESIF and FP7 / H2020.

In summary, it may be said that there was no conscious effort to develop any specific synergies between the different programmes. However, there have been a few instances but any such examples would be described as incidental rather than by design.

## 2014-2020 Programming Period

With reference to the current programming period, there have not been any substantial improvements regarding the concept of utilising multiple funding sources towards the same objective. The National R&I Strategy 2020 (MCST, June 2014) briefly mentions the objective of developing synergy between ESIF funds and the H2020 programme, but it is only when the rolling R&I action plan currently under development will be finalised that it will become apparent whether there will be any specific measures aimed at this objective.

The Partnership Agreement (Ministry for European Affairs, Oct 2014) includes a section on coordination between ESIF funds and other EU and national funds, including a passing reference to H2020. However, there are no details about possible synergies which might be explored or developed in this regard. Likewise, Operational Programmes I and II (Ministry for European Affairs, March 2015) both include a brief reference to the objective of developing synergies between the ESIF and Horizon2020 but the idea is not elaborated upon and there are no specific details on this point.

## Possible Measures to Promote Synergy

Some categories of synergy between different funding programmes are difficult to achieve, others less so.

Downstream sequential combination, where FP7 / H2020 research results are further developed using ESIF funding could be quite easily achieved using an instrument similar to the previous ERDF R&D Grant Scheme for industry managed by Malta Enterprise.

Alternative funding could also be considered, although this would be most easily achieved in respect of H2020 proposals submitted by Maltese partners alone (e.g. some Marie Curie actions, ERC grants, some SME instruments, other). For this to work with consortia involving overseas partners there would need to be similar schemes in force in the other countries, as well as requiring some degree of coordination in timing of ESIF calls.

On the other hand, simultaneous / cumulative funding could pose some problems. It is not easy to see how a single project could involve both H2020 and ESIF funding – calls would have to be time-coordinated, and difficulties would arise if the H2020 part was funded and the ESIF part was not, or vice versa.

## 8 TAKE-UP OF PUBLIC SECTOR RESEARCH RESULTS

The first Maltese national strategy for R&I in 2007 was built on the concept of industry-academia collaboration and established the commercialisation of research results for economic benefit as a key policy objective. More or less simultaneously, the University of Malta oriented itself more closely towards industry and set up a Knowledge Transfer Office to nurture industry-academia relations.

In spite of this, the policy mix does not include instruments specifically designed to promote uptake of public sector research results, although there are a number of initiatives which support this activity indirectly. For example, the Commercialisation Voucher Programme (part of the FUSION Programme) managed by the MCST finances a suite of activities related to commercialisation of research results including market research, IP checks and patent applications. The programme is open to both academia and to the private sector. The commercialisation programme was only introduced in 2012 and insufficient time has elapsed for a proper evaluation of its impact. The Commercialisation Voucher Programme in 2014 funded 10 initiatives which are at various stages within the Programme and will continue running through 2015 (Ministry of Finance, April 2015).

The TAKEOFF Seed Fund and TAKEOFF Business Incubator were introduced in 2014 and are managed by the University of Malta. The Fund operates on the basis of a competitive call and provides grants of between €2,500 and €20,000 for early-stage and start-up development to help promising ideas changing into commercial products and services. The first call for applications was made in April 2014 and received a total of 30 applications of which 9 were selected for funding. One year later these projects had succeeded in raising €0.5m of funding to finance their continued growth (University of Malta, April 2015). A second call in 2015 received 50 applications of which 11 were selected.

While most of the Fund is open to innovative start-ups from both within and outside the University, it can also be leveraged for commercialisation of University research. It also includes a 'proof of concept' award restricted to academic staff to assist them in commercialisation of research conducted at the University.

The Incubator provides work space, business support and advice within a vibrant academic environment. The TAKEOFF staff and mentors help the start-ups design the business plan, set milestones and achieve independent functioning within 12-18 months. TAKEOFF matches the start-ups with experienced enterprise coaching, and holds guiding workshops for the upcoming entrepreneurs. It holds 'lean start-up development' seminars and organises regular sessions where speakers/domain experts speak at the Incubator every month.

The Malta Aquaculture Research Centre was set up in 1988 with the objective of developing a fish farming industry in Malta. It has successfully developed techniques for hatching eggs and rearing fish of several species and has been instrumental in the development of the local aquaculture industry. Although it has been fairly successful in participating in the Framework Programme, it has not benefitted from programmes such as the European Maritime and Fisheries Fund.

Malta is not involved in any lead market initiatives, and there are no government initiatives promoting the public procurement for innovation approach.

## 9 COUNTRY TAILORED POLICY SUGGESTIONS

### Conclusions

The information and analysis presented in the preceding sections may be summarised as follows:

1. During the 2007-2013 programming period, structural funds were successfully utilised for R&I in amounts which exceeded national funding levels;
2. Structural funds were used primarily for developing national infrastructure, for infrastructure in academia, for promoting industry R&I and for HR capacity-building;
3. Structural funds were not used for funding academic research or public sector research, despite very limited national funding in these areas;
4. All allocated structural funds were fully taken up, indicating that there are no issues of absorption capacity;
5. During the previous programming period, no real attempt was made to develop synergies between various national and EU funding (structural funds, FP7, national funds). A small number of weak synergies developed spontaneously rather than as a result of any design or planning on the part of policy-makers.
6. With reference to the new programming period 2014-2020, the concept of synergy is touched upon and established as an objective in both the National R&I Strategy 2020 as well as in the Operational Programmes. However the documents do not translate this objective into any specific targets or concrete measures, and there is a real fear that that in the absence of such targets, these intentions will fall between the cracks.

### Suggestions

Although the Operational Programmes have been finalised it is not too late to introduce some elements of synergy into the ESIF plans. With reference to implementation of the National R&I Strategy, the Rolling R&I Action Plan is due to be completed by September 2015, and although it may not be possible to introduce synergy into the first version, the planned approach of updating this plan on a regular basis allows the introduction of appropriate measures in future versions.

The following recommendations are being proposed with the objective of developing synergies between the various funding sources.

1. Establish a task force involving the three key policy-makers (MCST, Parliamentary Secretariat for EU Funds, Malta Enterprise) with the mandate to analyse and take decisions on what funding synergies can be developed in the short, medium and longer term.
2. The MCST should embed specific objectives and targets backed up by concrete measures for developing synergies in the Action Plan supporting the National R&I Strategy 2020, while the Parliamentary Secretariat for EU Funds should do the same in the ESIF Operational Programmes.
3. Serious consideration should be given to developing a scheme for funding H2020 proposals which achieved high scores but did not get funded (alternative funding). This will have the

additional benefit of encouraging participation in H2020, as well as reducing the workload of the local evaluation teams.

4. Assess the possibility of developing ESIF schemes for exploiting the results of previous FP7 / H2020 projects (downstream sequential combination).

The following recommendations are being made in a broader context and with a long-term perspective in order to address weaknesses in the existing R&I regime:

1. The Parliamentary Secretariat for EU Funds should ensure proper involvement of relevant players in the ESIF OP development process.
2. The Parliamentary Secretariat for EU Funds together with the MCST should explore the possibility of utilising ESIF for funding academic R&I.
3. Due consideration should be given to the utilisation of ESIF funding for developing public research centres such as the Malta Aquaculture Research Centre, or research centres catering for Malta's distinctive characteristics e.g. in agriculture, in construction;
4. Due consideration should be given to the utilisation of ESIF funds for developing centres of excellence in selected S&T areas.
5. The Manufacturing Research Platform pilot project undertaken by the MCST should be followed up (most research in Malta relates to manufacturing) with similar projects leading to increased expertise, improved prospects for attracting FDI, increased competitiveness and prospects for economic growth.
6. The Parliamentary Secretariat for EU Funds, if necessary in conjunction with the EC, should seriously evaluate the possibility of relaxing ESIF administrative controls in the case of smaller projects, for example those having a budget not exceeding €1m.
7. The local managing authority should endeavour to the maximum extent possible to reduce bureaucracy, allow more flexibility during project implementation, and focus monitoring on result achieved rather than on the process of getting there.

## 10 REGIONAL ANALYSIS

Not applicable.

## 11 ABBREVIATIONS

ERDF/CF, ESF, EARDF and EMFF

CF Cohesion Fund

EARDF European Agricultural Fund for Rural Development

EMFF European Maritime and Fisheries Fund

ERDF European Regional Development Fund

ESF European Social Fund

ESIF European Structural and Investment Funds

FPD Funds and Programmes Division (within MEAIM)

MCST Malta Council for Science and Technology

MEAIM Ministry of European Affairs and Implementation of the Electoral Manifesto

OP Operational Programme

PPCD Planning and Priorities Coordination Division (within MEAIM)

SF EU Structural Funds (comprising the ERDF and ESF).

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