European Commission

Synthesis Report

EUFORI Study

European Foundations for Research and Innovation

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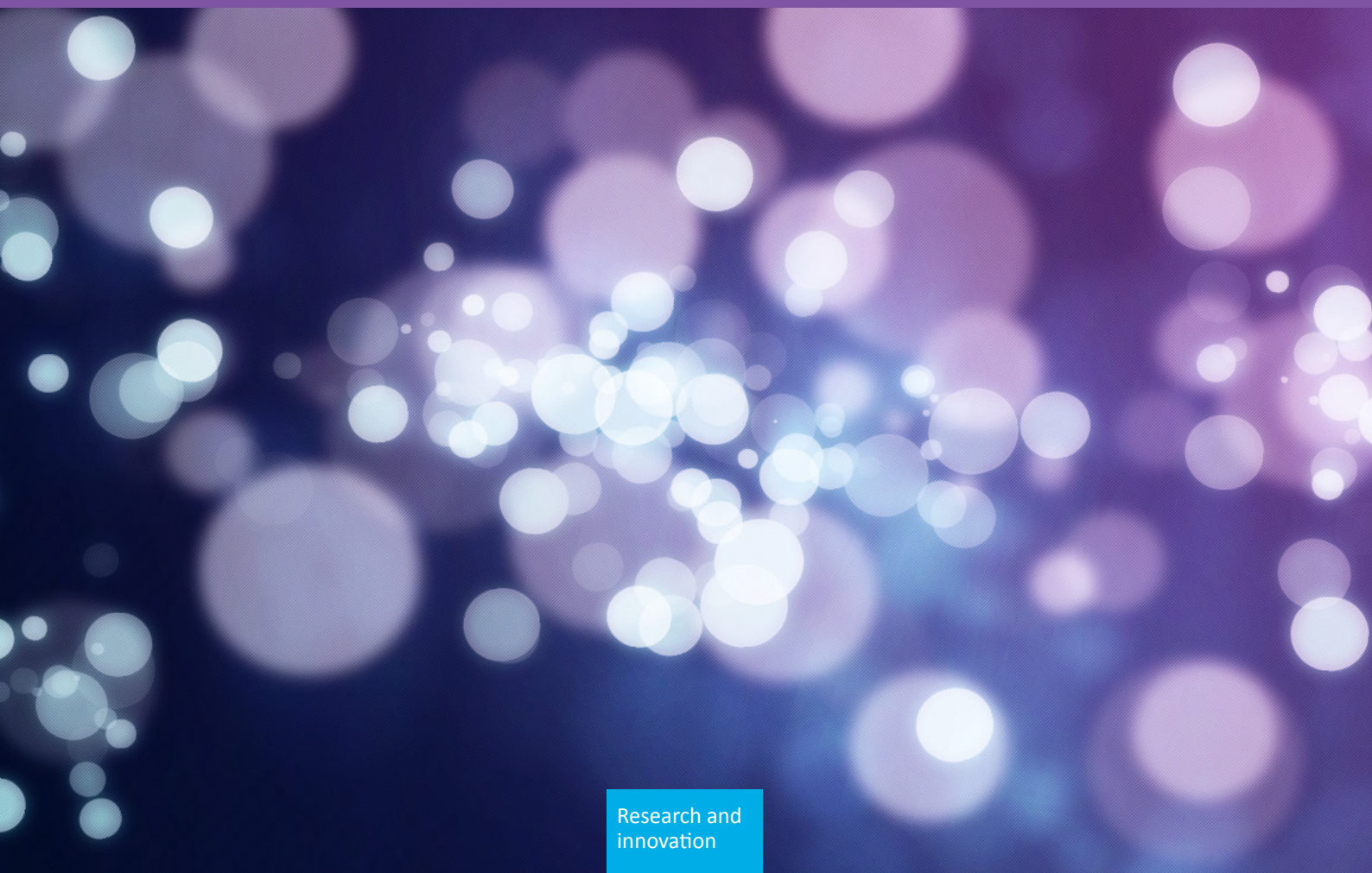
With the cooperation of the EUFORI network of country experts



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Directorate-General for Research and Innovation

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Foreword

This report provides a thorough and comprehensive analysis of the contributions that foundations make to support research and innovation in EU Member States, Norway and Switzerland.

Over the last 25 years, the role of foundations as supporters of research and innovation in Europe has grown significantly in scope and scale. However, the landscape is fragmented and, till now, largely uncharted. We knew little about the vast majority of such foundations, their activities or even their number, and information about their real impact on research and innovation in Europe was very limited.

The implications are important, because to strengthen Europe's research and innovation capacity and create the necessary framework conditions to boost our competiveness, we need a clear picture of what is happening on the ground.

This study helps fill this knowledge gap by analysing foundations' financial contributions, and provides useful insights into the different ways they operate. It also identifies emerging trends and the potential for exploring synergies and collaboration between foundations, research-funding agencies, businesses and research institutes.

Among the many interesting findings presented, what struck me most is the size of the total budget — at least €5 billion per year — provided from foundations for research and innovation in domains with an important social impact. This figure is about half the average annual budget that the EU will give to researchers and innovators throughout the whole duration of the Horizon 2020 programme.

Although this report clearly targets science and innovation policy-makers and, of course, the foundations themselves, I believe that policy-makers in other fields will also benefit from its findings. It is a very valuable contribution to evidence-based policy-making.

Robert-Jan Smits

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The EUFORI Study is the result of the growing interest in the potential of foundations. The collective contributions of foundations to European societies, and to the realm of research and innovation in particular, have never been mapped before on such a European scale. Hereby, we would like to express our gratitude to those who have made this substantial project possible.

We would like to thank the European Commission Directorate-General for Research and Innovation for taking the lead in this study and for placing foundations on the European agenda. We are in particular grateful to Dr. Marita Kayamanidou and Ignacio Puente González of the DG Research and innovation for their advice and their supervision of the research project. We look back upon a warm and successful co-operation.

Working with expert researchers from 29 countries has been an enriching and inspiring experience. The role of the experts was of vital importance and their expertise and commitment have made this research possible. We would like to thank them for the dynamic and fruitful collaboration. As most researchers are members of the European Research Network on Philanthropy (ERNOP), the network has been an invaluable asset in making EUFORI a feasible project. We are especially thankful to Helmut Anheier for sharing his expertise on foundation models in his contribution to chapter 1.

We are grateful to the participating European foundations without whom this research would not have been possible. By taking part in the EUFORI Study they have shared essential information on their contributions, practices and roles.

After two and a half years of intensive research, we are proud of the collective effort resulting in 29 individual country reports and one comparative synthesis report. We hope that the reports will reflect the enthusiasm with which they were written.

With the support of the European Commission, the dedication of the expert researchers and the participation of European foundations, it was possible to gain more insight into a world that was largely unmapped up to this moment. It has to be noted that more research is necessary to map the field of philanthropy. We hope that this study will be a stepping stone for future research projects to learn more about the contributions of foundations to societies.

Amsterdam, February 2015

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Executive summary

The European Union faces a challenge to gain a competitive advantage on the global economic stage. The knowledge economy, with research and innovation at its centre, is a central pillar in the ambition to achieve this position. In order to reach the 3 % target of Europe's 2020 strategy (3 % of the GDP to research and innovation), EU governments and the business sector need to continue their research funding. However, the awareness of the potential of philanthropy in general, and of foundations specifically, as a source of funding for research in Europe, is growing among policymakers. The private contributions of households, charities and foundations can play an important role in the stimulation of specific research areas, and can help to diversify funding.

In recent years increasing recognition has been given to the need to improve knowledge on foundation support for research and innovation. Europe has developed a large, heterogeneous and fragmented foundation sector. However, figures about the number of foundations supporting R&I in Europe were lacking, thus making it very difficult to accurately assess the importance and role of foundations in the European research landscape.

In July 2012, the DG Research and Innovation of the European Commission commissioned the Center for Philanthropic Studies at VU University Amsterdam, to coordinate a study on the contributions of foundations to research and innovation in the EU 27, plus Norway and Switzerland.

The European Foundations for Research and Innovation (EUFORI) Study quantifies and assesses the financial support by foundations and their policies for research and innovation in the European Union, makes a comparative analysis between the EU Member States, and identifies trends and the potential for future developments in this sector.

The study was conducted in close cooperation with researchers from 29 countries. Most researchers are members of the European Research Network on Philanthropy (ERNOP). The study builds on the FOREMAP research, refining its methodology, extending the number of countries covered and conducting a comparative analysis. The EUFORI study is the first attempt at a comprehensive mapping of the overall financial contributions of foundations supporting research and innovation across Europe.

The main results of the EUFORI Study

Data collection

The total number of R&I foundations in Europe is not known due to a lack of registers and databases in many countries. Despite these obstacles, a broad sample of 12 941 potential R&I foundations was selected for the study. The EUFORI Study used data from existing registers and snowball sampling. Due to incom

plete and out of date information, the sample was possibly blurred by the inclusion of non-existing, non-active or non-R&I focused foundations. However, to include as many eligible foundations as possible and to collect necessary and valuable data, the nearly 13 000 foundations selected all received an invitation to the study.

The process of data collection and data cleaning ended with a EUFORI dataset containing information from 1 591 foundations supporting R&I. Financial statistics such as income, assets and expenditure were collected from approximately 1 000 foundations, as foundations were sometimes reluctant or not able to provide financial information. It should be noted however that the EUFORI Study contains the most substantial part of R&I foundations in Europe, including the most important players in the research arena. The main descriptive findings from the quantitative analysis are summarised in this section.

Types of foundations

R&I Support: Foundations contributing to research and innovation are mainly interested in supporting research. The majority (61 %) of the 1 591 foundations claim to support research only, whereas 6 % of the foundations only support innovation, and the remaining foundations (33 %) support both. However, for the majority of foundations (64 %), R&I is not an exclusive purpose, as these foundations support other purposes alongside R&I.

Grantmaking versus operating: 47 % of foundations claim to be grantmaking only, whereas 41 % of the foundations claim to only carry out operating activities. The remaining 12 % of the foundations are involved in both grantmaking and operating activities. The operating foundations are generally much smaller in terms of assets, income and expenditure than their grantmaking counterparts. Operating foundations can mainly be found in the Mediterranean countries, where 80 % of the foundations are of the operating type. Scandinavian countries on the other hand are characterised by a large share of grantmaking foundations (85 %).

Year of establishment: nearly three quarters (72 %) of the foundations supporting R&I were established since the year 1990. This is especially true for Eastern European countries, where it was not possible to set up a foundation during the Communist regimes.

Origins of funds

Financial founders: the majority of foundations in the sample are set up by private individuals/families (54 %). Corporations (18 %), nonprofit organisations (18 %) and the public sector (17 %) are also frequently mentioned as founders.

Total income: 1 134 foundations reported a total income of EUR 18.1 billion. There is a considerable skewness in the distribution of income where a small group of foundations is responsible for the lion's share of the total income. This skewness reflects the difference between the mean income (EUR 16 million) and the median income (EUR 0.2 million). There are also large differences in the aggregate income between the countries. The aggregate income of the top three countries (in terms of income) accounts for more

than half that of the total European income. Similar patterns of skewness in and between countries were found for other financial statistics such as assets and expenditure.

Sources of income: foundations draw their income from a variety of sources. In Europe, 63 % of the foundations can be regarded as a 'classic foundation', deriving their income from an endowment. More than a third of foundations (36 %) claimed to receive income from their government. For some foundations, income from government is the most important source of income. Donations from individuals were mentioned by 31 %, followed by donations from corporations at 29 %. Proceeds from an endowment account for 48 % of the total known income.

Assets: 1 052 foundations reported collective assets of nearly EUR 127 billion. The average amount of assets reported is EUR 120 million. Nearly all the foundations hold liquid assets, the largest share of which takes the form of long-term investments.

Expenditure

Total expenditure: the total sum of expenditure of foundations is just over EUR 10 billion. The majority of total known expenditure, around 61 %, is directed towards research and only 7 % towards innovation. A third of total expenditure is destined for other purposes. The mean amount foundations spend is nearly EUR 9 million, whereas the median amount is EUR 0.2 million.

R&I expenditure: the total expenditure on R&I by 991 foundations is EUR 5.01 billion. The largest share, EUR 4.5 billion (90 %) is contributed to research. EUR 0.5 billion (10 %) is contributed to innovation. Innovation as a concept is much more difficult to grasp than research. In reality research and innovation are often intertwined, which makes it difficult to analyse them separately.

Applied versus basic research: 83 % of the EUFORI foundations have a focus on applied research, while 61 % support basic research. The distribution of expenditure on the other hand is nearly even, as both applied and basic research receive approximately 50 % of the known research expenditure.

Changes in expenditure: foundations were mostly optimistic about alterations in their expenditure. For the majority of foundations the expenditure remained stable compared to the previous year. For more than a quarter their expenditure increased. For the following year, the prognosis was also optimistic, as 25% expected an increase in expenditure.

Focus of support

Beneficiaries: the main beneficiaries of foundations are private individuals. 55 % claimed to contribute support for individuals. Other important beneficiaries are public higher education institutions that can count on support from almost half of the foundations (48 %). Research institutes complete the top three with almost a third (32 %) of foundations benefiting them.

Research areas: medical science is the most popular research area amongst foundations. This is true both in the number of foundations (44 %) and in the amount of expenditure (63 %). Other popular research areas in terms of the number of foundations are social and behavioural science and natural science. In terms of expenditure engineering and technology is also in the top three.

Research-related activities: the lion's share of foundations' expenditure goes to the direct support of research. Only a small percentage (14 %) of the total research expenditure is destined for research-related activities. Of these activities the dissemination of research is by far the most popular activity, as it is supported by 78 % of the foundations. 'Research mobility and career development' and 'science communication' follow at a distance and are also popular.

Geographical dimensions of activities

Geographical distribution: foundations mainly operate at the national level. Two thirds of the foundations' support is distributed at a national level. Only a small percentage (10 %) of the total support is distributed at a European or international level.

Role of the EU: collaboration is the most important role foundations envision for the EU, followed by the provision of fiscal facilities and a contribution to awareness raising about foundations.

Foundations' operations and practices

Management: most foundations are managed by either a governing board with appointed members (51 %) or by a board with elected members (42 %) . The original founder is still in charge of the strategy for 15 % of the foundations [1].

Grantmaking operations: demanding evidence of how grants have been spent is a common practice for nearly all grantmaking foundations, with 85 % of foundations often or always demanding evidence. Conducting evaluations is also quite common, with 58 % of the foundations stating that they often or always conduct evaluations.

Partnerships: a little more than half (51 %) of the 897 reporting foundations indicated that they develop joint research activities in partnership with others. Universities are the most popular partner to collaborate with, followed by other foundations and research institutes. Operating foundations are more often engaged in partnerships than grantmaking foundations.

Roles: a clear majority of foundations see themselves mainly as complementary to other players in the R&I domain of. Foundations also identify themselves initiators, but not in a substituting role. Foundations do not perceive their role as competitive.

1 Multiple answers were possible explaining why the aggregated percentages exceed 100%. For more information view paragraph 2.6 in Chapter 2: Sketching the landscape of foundations supporting R&I in Europe.

Table 1: Comparative perspective: foundations participating in EUFORI

		Cumulative amount (mln €)	Proportion of foundations (%) that	
Country	*n*	Total R&I spending	are grantmaking	receive income from endowment
Austria	44-64	35.6	77 %	84 %
Belgium	14-38	369.7	58 %	50 %
Bulgaria	5-10	0.4	33 %	38 %
Cyprus	1-7	0.0[1]	0 %	0 %
Czech Republic	29-59	1.9	33 %	25 %
Denmark	9-22	441.8	94 %	94 %
Estonia	10-36	156.5	27 %	5 %
Finland	52-69	95.2	93 %	93 %
France	12-25	69.5	65 %	72 %
Germany	75-152	581.1	73 %	92 %
Greece	0-6	1.2	20 %	50 %
Hungary	37-253	13.1	48 %	60 %
Ireland	5-14	19.2	85 %	42 %
Italy	13-40	38.8	31 %	38 %
Latvia	6-10	0.5	33 %	25 %
Lithuania	1-4	0.3	75 %	0 %
Luxembourg	4-9	0.3	33 %	67 %
Malta	2-9	0.1	11 %	25 %
Netherlands	28-48	142.6	91 %	83 %
Norway	58-102	347.4	77 %	62 %
Poland	15-37	27.5	30 %	18 %
Portugal	1-19	48.1	39 %	73 %
Romania	2-8	0.9	14 %	29 %
Slovakia	3-11	0.6	89 %	67 %
Slovenia	1-2	0.1	*	*
Spain	67-208	327.0	17 %	39 %
Sweden	36-87	436.7	94 %	92 %
Switzerland	114-184	195.5	68 %	67 %
United Kingdom	28-55	1 662.5	93 %	98 %
All countries	720-1 591	5 014.1	58 %	51 %

1 Total R&I foundation spending for Cyprus is 0.03 million Euros

Descriptives

The main comparative statistics of the quantitative analysis of the EUFORI study, R&I spending, % grantmaking, % income from endowment are presented according to country in this table. The number of foundations reporting in each country is an important determinative factor for the total amounts. Moreover, the skewness within countries should be taken into account. Extremely large foundations have a major influence on the total amounts, as these foundations account for the largest share in expenditure. The presence (or absence) of large foundations can therefore distort the picture of a country's foundation landscape. EUFORI has aimed at including the most important and influential foundations to gain an insight into the largest share of foundations' R&I expenditure. However, the EUR 5 billion should be considered as a lower bound estimate.

Explaining the differences

Countries in Europe do not only differ from each other in terms of their foundation model, but also with respect to many other characteristics, such as economic and political conditions, the philanthropic culture, legal conditions, and R&D investments by government and corporate enterprise. How much of the country level variance in foundation activity can be accounted for by these characteristics?

We find a higher R&I expenditure by foundations in countries with a higher score on the democracy index (Economist Intelligence Unit 2013), offer more business freedom, and have a higher GDP. These economic and political conditions foster corporate enterprise investments in R&D, which are positively related to the R&I expenditure of foundations.

General conclusions

The conclusions are based on an extensive data analysis of the foundations participating in the online survey of the EUFORI Study (n=1 591) and a qualitative and in-depth analysis of the national country reports.

Foundations supporting R&I in Europe: a relatively young and growing sector

Based on the information from the national reports we see in many countries a considerable growth of the number of newly established foundations in Europe since WWII. Nearly three quarters of the EUFORI foundations supporting R&I were established since the 1990s. Not only in Eastern Europe, where it was not possible to set up foundations under the Communist regimes, but also in Western Europe.

Foundations contributed at least EUR 5 billion to R&I in 2012

In 2012 at least 991 foundations in Europe contributed more than EUR 5 billion to research and innovation. The support of foundations for research and innovation in Europe has never been studied on such a large scale. Although this is the contribution of the most substantial part of R&I foundations in Europe, including the most important players in the research arena, the amount should be considered as a lower bound estimate. More than one third of the foundations participating in the EUFORI study (n=1 591) were not able or reluctant to provide financial information about their expenditure on R&I. Besides, from the 12 000 – for the purpose of this study – identified foundations which could potentially support R&I in Europe, only 13 % participated in the EUFORI Study. It is therefore expected that the economic relevance of R&I foundations in Europe is higher than the lower bound estimation of EUR 5 billion.

Despite the fact that we concluded that the contribution of foundations in the research area in Europe is substantial, the economic weight of foundations' support for R&I is small compared to investments of other sectors such as the government and business sector. This reflects how foundations see their own role in the research arena, that is complementary. Almost three quarters of the EUFORI foundations described their role as complementary to public support or the support of others, e.g. the business sector. It should be acknowledged, however, that from a beneficiary perspective the foundations' contributions can make a significant difference. For 44 % of the foundations in the EUFORI Study, an initiating role is prominent. Foundations which could be characterised as independent and risk-taking organisations provide the seed money for new and innovative initiatives, sometimes in undersupplied or underdeveloped areas.

A skewed landscape of foundations supporting R&I

There are large differences in R&I foundations' expenditure between countries in Europe. The top countries contributing to research are the United Kingdom (EUR 1.66 billion), Germany (EUR 0.58 billion), Denmark (EUR 0.44 billion) and Sweden (EUR 0.44 billion). Striking is the skewness of the distribution in R&I expenditure by foundations in Europe. These four countries are responsible for two thirds of the total expenditure on R&I by the foundations identified in the EUFORI Study.

Financially vulnerable foundations most prevalent in peripheral and post-Communist countries

The EUFORI Study revealed that most R&I foundations in post-Communist (Eastern European countries) and peripheral countries (Greece, Cyprus and Ireland) are characterised by a lack of appropriate funds. Foundations are mostly grantseeking, have no or small endowments and are mainly dependent on EU structural funds or governmental subsidies. As a consequence the financial independence of the foundations in these countries is low.

Variations in R&I foundation activity between countries in Europe reflecting the economic and political conditions and corporate R&D investments

Most aspects of foundation activity show moderately strong relationships with the economic and political conditions. We find higher R&I expenditure by foundations in countries with a higher score on the democracy index, offer more economic freedom, and have a higher GDP. These economic and political conditions foster corporate enterprise investment in R&D, which are positively related to the R&I expenditure of foundations. Foundations are also more likely to be of the grantmaking type and to rely on income from an endowment in countries with higher levels of business investment in R&D. Government investment is largely unrelated to foundation activity. Finally, we found that the current legal conditions are largely uncorrelated with foundation activity. Neither the amount spent on research and innovation, the type of foundation (grantmaking vs. operating) nor the source of income (from an endowment or not) are related to scrutiny by the authorities, the availability of tax deductions for donations, nor to tax exemptions for public benefit organisations such as foundations. This result suggests that the current legal treatment of foundations does not encourage foundation activity supporting research and innovation. Future research is required to uncover why legal treatment is not correlated with foundations' spending on R&I.

The fragmented landscape of foundations supporting R&I

The European landscape of foundations supporting R&I can be characterised by a few very large, well-known foundations with substantial budgets available for R&I and many small foundations with modest resources that often operate in the background. Due to a lack of systemised and exhaustive data on foundations in many countries the total number of foundations active in the area of research and innovation in Europe is unknown. Following the strategy suggested by the FOREMAP Study, the EUFORI Study used data from existing registers and snowball sampling to build a comprehensive database of foundations supporting research and innovation. It turned out that the identification of foundations supporting R&I in Europe was a challenging one. Even in countries with a register or database it was still not easy to create lists, as the databases were not always up to date. The national experts identified more than 12 000 foundations which could potentially support R&I.

Another important conclusion resulting from the EUFORI Study is that many foundations supporting R&I do not consider their own foundation as an R&I foundation, nor do they define themselves as a research community. This could be explained by the fact that research and innovation is often not the exclusive focus of foundations. Approximately two thirds of the EUFORI foundations are not exclusively focused on R&I. Another explanation (which is closely linked to the previous one) lies in the elusive character of research and innovation itself. Research and innovation is often not seen as a purpose/field in itself, but is instead used as an instrument for other purposes and areas in which foundations specialise (such as health, technology, society). As a consequence, the landscape of foundations supporting R&I in Europe could be characterised as fragmented. The lack of a common research identity among foundations supporting research and innovation is reflected by a lack of dialogue between foundations (occasionally between foundations that deal with similar topics, e.g. health foundations), let alone the existence of a R&I collaboration infrastructure or umbrella organisations for foundations active in the research arena.

EUR 127 billion in assets: a considerable amount of money

The assets of 1 052 foundations supporting R&I in Europe amounted to EUR 127 billion in 2012. This amount should be considered as a lower bound estimate since not all foundations participating in this study have provided information on their financial assets. It is, on the other hand, estimated that the asset information of the largest foundations contributing to R&I is included.

Cross-border donations in Europe in its early stages

Foundations supporting R&I in the EUFORI Study allocated 90 % of their expenditure for these purposes at a national or regional level. Based on the information in the national reports, this is mainly caused by the statutes of a foundation which often impose restrictions on its geographical focus. Moreover, the small financial basis of many foundations do not allow them to become active at an international level.

Recommendations

Due to the diversity in cultures, historical contexts and the legal and fiscal frameworks of European countries, the recommendations are general in nature. It should be noted, however, that all countries have their own national country reports, including analyses, best practices, conclusions and extensive recommendations. The main objective of the recommendations made in this final chapter is to increase the potential of R&I foundations in Europe. Specifically, the recommendations aim to increase the impact of existing R&I foundations, increase the funding by R&I foundations for R&I, increase the income of R&I foundations and to create new R&I foundations.

Recommendation 1: Increase the visibility of R&I foundations

This recommendation is addressed to foundations, national governments, the European Commission, businesses and the public at large. It is related to the fragmented landscape of foundations supporting R&I in Europe, which is reflected by a lack of dialogue between foundations. Growing visibility will enhance the impact of existing funding. If foundations become more aware of each other's activities, the effects and impact of their contributions can be increased. Moreover, the other stakeholders involved, such as the business community and research policy-makers, will become more knowledgeable about the foundations' activities. From the perspective of the beneficiaries, research institutes, universities and researchers will find their way to foundations more easily. In order to increase the visibility of foundations supporting R&I at a national level, the encouragement of the creation of national forums of research foundations is recommended as a next step. The opportunities and mutual benefits for foundations supporting R&I at a national level should be explored.

Recommendation 2: Explore synergies through collaboration

Different players can be distinguished in the domain of research (governments, business, foundations and research institutes/researchers), each with their own distinctive role. Together, these groups can make a difference in increasing the potential for R&I. They can create synergy through collaboration, which should be interpreted in the broadest sense, varying from information sharing, networking, co-funding and partnerships. Mutual advantages can be derived from pooling expertise, sharing infrastructure, expanding activities, pooling money for lack of necessary funds, avoiding the duplication of efforts and creating economies of scale.

Based on the conclusions of the EUFORI Study there is an indication for the need for improved dialogue, information exchange, networking and cooperation between foundations supporting R&I, as well as between foundations, governments, business and research institutes (researchers). An EU-wide study is recommended on the needs, the opportunities, mutual benefits and barriers for collaboration between all the abovementioned actors. The network of national experts (mostly members of ERNOP) built for the EUFORI study can be of added value for this study and can facilitate the collaborative relations between the EC/RTD, the R&I foundation sector and other stakeholders in Europe.

Recommendation 3: Create financially resilient foundations

This recommendation is addressed to foundations. The EUFORI Study revealed that the most financially vulnerable foundations are small grantseeking foundations characterised by a lack of appropriate funds, no or small endowments, and are mainly dependent on EU structural funds or governmental subsidies. To assure their sustainability, foundations should therefore aim to become financially resilient and less dependent on uncertain or single streams of income by diversifying their sources of income, building endowments, exploring the opportunities in creating and investing in social ventures, and exploring the possibilities of a system of 'matching funds' for foundation-supported research projects at both a national and EU level.

Recommendation 4: Improve the legal and fiscal system

The national reports presented in this study show a variety in the way national legislators treat foundations, both legally and fiscally. Some national reports point out that the legal and fiscal conditions seem to hamper the establishment and functioning of foundations supporting R&I. The following recommendations are focused on reducing legal barriers for the creation and functioning of foundations, and are addressed to national governments for their implementation, while the EC can play a facilitating role by providing a platform to exchange information on best practice:

- Remove barriers and streamline regulations for setting up a foundation.
- Remove barriers to foundations' operations.
- Improve fiscal conditions for foundations supporting R&I.

Recommendation 5: Integrate philanthropy as a constituent of the EU welfare state paradigm

This recommendation is particularly addressed to EU and national policymakers and politicians. In many countries R&I is often perceived as a remit of the government. A 'change of culture' is necessary in universities, research institutes and national governments. Promoting a giving culture will increase funding for foundations. It will also bring about a change of culture in universities and research institutes which are not used to raising funds from philanthropic sources.

Philanthropy has been until now an isolated issue on the EC commissioners' agendas. However, the social market and cohesion target stipulated in the EU 2020 strategy opens a new window of opportunity. The focus on research and innovation is important, but it captures only a fraction of the growing societal significance of philanthropy. Philanthropy is not just a financial instrument for research and innovation. Foundations and fundraising charities fund important public services. It is an integral part of the resilience of societies and a key ingredient of social cohesion. Finally, by integrating philanthropy into the EU welfare state paradigm, philanthropy may truly live up to its potential as a way of increasing economic growth and creating jobs in Europe.

The EUFORI Study's methodology

In order to achieve the objectives of the EUFORI Study the research project consisted of five stages:

1. Building a network of national experts on foundations

The EUFORI Study was conducted by a network of researchers, foundation officers and scholars from 29 European countries. Most researchers are members of the European Research Network on Philanthropy (ERNOP).

2. Identification of R&I foundations in Europe

An important goal of the EUFORI Study was to identify and build a comprehensive contact database of foundations supporting research and innovation in all the member states. Following the strategy suggested in the FOREMAP study, the EUFORI Study used data from existing

registers and snowball sampling to build a comprehensive contact database of foundations supporting research and innovation.

3. National survey among the identified foundations

In order to assess foundations' financial support and policies for research and innovation, the data collection has been carried out from the identified foundations in each country by means of an online survey. The survey questions were structured using the following topics: types of foundation, sources of income, assets, expenditure on research and innovation, types of support, focus of support, geographical dimensions of activities, foundations' operations and practices, and the role of foundations in the R&I arena.

4. Interviews with foundation professionals

To contextualise the findings from the quantitative study, additional interviews with foundation professionals were conducted to gain a more in-depth understanding of the foundations' activities and their impact in the research/innovation arena.

5. Concrete examples of innovative practices

The identification of innovative and successful examples of research and/or innovation projects with a major impact in the field enabled the sharing of best practice among member states. Innovative examples enriched and illustrated the findings from the survey.

Defining foundations, research and innovation for the purpose of this study

The definitions used in this study are as follows:

Foundation: 'independent, separately-constituted non-profit bodies with their own established and reliable source of income, usually but not exclusively, from an endowment, and their own governing board. They distribute their financial resources for educational, cultural, religious, social or other public benefit purposes, either by supporting associations, charities, educational institutions or individuals, or by operating their own programs' (EFC 2007).

Research: For the purpose of this study research included basic and/or applied research projects or programs covering all the areas of science, technology from social science, the humanities, engineering and technology, natural science, agricultural science and medical science (including clinical trials phases 1,2,3). Research-related activities were also covered. These included support for projects/programs on researcher mobility (career structure and progression), knowledge transfer (including intellectual property rights/patents), civic mobilisation or advocacy (trying to change social opinions and/or behaviours regarding science, including promoting science-related volunteering, or promoting researchers' rights and social status), infrastructure (laboratories, research centres, pilots or demo plants), the dissemination of research (seminars, conferences, etc.) and science communication (museums and science parks).

Innovation: The definition of 'innovation' used in EUFORI Study is based on the definition of the Innovation Union: 'The introduction to the market of a new product, methodology, service and/or technology or a combination of these aspects'.

The study primarily focused on research and innovation (R&I) foundations, which means foundations whose primary objective is to support research and innovation. Secondly, the study focused on foundations that partly support R&I, such as foundations that are active in the area of health or in social, economic and political areas, with a significant aspect of their budget being focused on research and innovation.

1 Introduction

This study, also known as European Foundations for Research and Innovation (EUFORI) Study, aims to quantify and assess foundations' financial support and policies for research and innovation in the EU, to make a comparative analysis between the EU27 Member States (and Norway and Switzerland), and to identify trends and the potential for future developments in this sector.

The central questions in this study are, among others, how many foundations supporting R&I in Europe can be identified? What is the financial contribution of foundations to R&I in terms of expenditure? How can differences between European countries in the research and innovation activities of foundations be explained? In this chapter the contextual background and relevance of the EUFORI Study will be discussed.

1.1 Contextual background to the study

The European Union faces the challenge of gaining a competitive advantage on the global economic stage. The knowledge economy is one of the main ways of reaching this goal. Compared to other parts of the world, Europe is lagging behind with regard to public and private investment in research and innovation. Although countries like Sweden and Finland are investing heavily and are ahead of many other European countries, the EU as a whole is falling behind Asia and the US in terms of R&D expenditure as a percentage of GDP [1].

In order to reach the 3 % target of Europe's 2020 strategy (3 % of GDP to research and innovation), EU governments and the business sector need continue to fund research. However, the awareness of the (untapped) potential of philanthropy as a source of funding for research in Europe is growing among policy-makers. The private contributions of households, charities and foundations can play a very important role in some specific fields and help to diversify funding. Philanthropy has made a comeback in recent years and is finding new form and meaning in an emerging civil society (Schuyt, 2010) [2]. Schuyt argues that:

> *'Government, market and philanthropy are three allocation mechanisms for achieving goals for the common good. Strangely enough, it appears that a monopoly of any one of these mechanisms does not lead to a viable society.*

1 http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/R_%26_D_expenditure

2 Th.N.M. Schuyt (2010) 'Philanthropy in European welfare states: a challenging promise?'. International Review of Administrative Sciences 76(4): 774-789.

Perhaps the solution for the future lies in some form of interplay among these three mechanisms, in which government guarantees a strong foundation and the market and the philanthropic sector create space for dynamics and plurality' (Schuyt, 2010: 786).[1]

Schuyt continues that the growth of philanthropy offers a promising challenge for policy-makers in welfare states. In recent years increasing recognition is being given to the need to improve knowledge about foundation support for research and innovation. Europe has developed a large, heterogeneous and fragmented foundation sector. A rough estimate is that about 110 000 public benefit foundations exist in the EU [2]. Figures on the number of foundations supporting R&I in Europe are scarce. Unfortunately, little information is available to accurately assess the importance and role of foundations in the European research landscape. Centralised data on the collective contribution of foundations and their activities are unavailable in several Member States.

In 2005, the European Commission set up an independent expert group to 'identify and define possible measures and actions at national and European level to boost the role of foundations and the non-profit sector in supporting research in Europe' (European Commission, 2005: 5) [3]. In its final report 'Giving more for research in Europe', the expert group outlined a number of policy recommendations and suggests, among others, to improve the visibility and information about foundations supporting research in Europe. Following the recommendation of this expert group the FOREMAP project was launched in 2007 to develop a mapping methodology and tools to collect data on foundations' research activities in EU countries (EFC, 2009) [4]. This initiative was coordinated by the European Foundation Centre (EFC) and was co-funded by the European Commission. These tools were piloted in four countries (Germany, Portugal, Slovakia and Sweden) and recommendations were outlined in the report 'Understanding European Foundations. Findings from the FOREMAP project' on how best to expand mapping to the other EU member states.

The FOREMAP project laid the groundwork for the current study on foundations supporting research and innovation in the EU. In July 2012, the Center of Philanthropic Studies at VU University Amsterdam was commissioned by the European Commission, DG Research and Innovation, to coordinate a study on the contributions of foundations to research and innovation in the EU 27 (plus Norway and Switzerland). This

1 Ibid

2 See: http://ec.europa.eu/internal_market/company/docs/eufoundation/feasibilitystudy_en.pdf

3 European Commission (2005) Giving more for research: the role of foundations and the non-profit sector in boosting R&D investment. Directorate-General for Research, EC: Brussels

4 EFC (2009) Understanding European Foundations. Findings from the FOREMAP project. EFC: Brussels

two-year study, also known as the European Foundations for Research and Innovation (EUFORI) Study is being conducted in close cooperation with researchers from 29 countries. The study builds on the FOREM-AP research, refining its methodology, extending the number of countries covered and conducting a comparative analysis. The aim of the EUFORI Study is to quantify and assess foundations' financial support and policies for research and innovation in the EU, to make a comparative analysis between the EU Member States, and to identify trends and the potential for future developments in this sector. The collection of data allows a better understanding of the role foundations play or could play in advancing research across the EU. Moreover, another side effect of the study is that it will increase and improve the visibility of research-funding foundations in Europe [1].

The awareness of the (untapped) potential of philanthropy as a source of research funding in Europe is not only growing among policy-makers, but also among the recipients of philanthropic funding for research, such as universities. In 2008 the EC Directorate General Research and Innovation commissioned the Tender 'Study to assess fundraising from philanthropy for research funding in European universities'. The study was carried out by the Center of Philanthropic Studies at VU University in cooperation with Kent University (European Union, 2011) [2]. They found that – despite a very few higher education institutions in the UK, philanthropic fundraising is not, on the whole, taken seriously in European universities. Although universities in Europe perceive foundations to be the most important donor (compared to other donors such as corporations, alumni, wealthy individuals), only a very small number of universities are raising significant sums of money for research from foundations. In a more positive light, this may be interpreted as indicative of potentially significant untapped potential.

1.2 Foundation models in Europe [3]

Introduction

The objectives, activities and the overall importance of foundations vary significantly across Europe. This applies also to foundations engaging in research and innovation. This is because foundations are inherently political institutions – less so in the sense of party politics and advocacy, and more so in terms of deep-seated institutional 'space' that societies allow private actors to become active in the public realm (Anheier and Daly 2007). For example, the long-standing Republican Jacobin tradition in France, combined with an aversion against the main mort dating back to the era of the French Revolution, meant that the relatively few existing French foundations simply did not fit the institutional mainstream (see Rozie, 2007). By contrast, the long history of charity in the United Kingdom, and the mostly synergetic, but sometimes tense, relations with the State, made foundations political institutions in a different way. By allocating a substantial space to them, they had to respond to the expectations that they indeed contribute to soci

1 Terms of reference for a Tender Study on 'Foundations supporting research and innovation in the EU: quantitative and qualitative assessment, comparative analysis, trends and potential', European Commission, DG Research and Innovation, July 2011.

2 European Union (2011). Giving in Evidence. Fundraising from philanthropy in European universities.

3 This section was written by Helmut K. Anheier, Professor of Sociology and Dean at the Hertie School of Governance in Berlin. He also holds a chair of Sociology at Heidelberg University and serves as Academic Director at the Center for Social Investment.

ety's wellbeing (Leat 2007). To add one more example, the social democratic preference for public over private action in Scandinavian countries like Sweden nonetheless co-exists with a foundation sector based largely on liberal and conservative values (see Wijkstroem 2007).

These institutional preferences rest on a complex mix of cultural and political values, and reflect both long-standing path dependencies and more recent developments. The revival of foundations in the Baltic countries or Poland illustrates the latter, and the Swiss case stands for centuries of continuity. France has in recent years introduced reforms to make it easier for private foundations to operate. Some other countries show severe historical discontinuities. For example, Germany had a bourgeoning foundation community linked to the rise of the urban middle class until the 1920s, only to see it collapse due to economic crises and the politics of totalitarianism. It didn't revive until the 1980s, when the economic wealth accumulated after World War II and regulations in favour of foundations began to produce results, slowly at first, and with higher growth rates over the last 20 years.

Foundation models

To account for the characteristics of the European foundation sector, Anheier and Daly (2007) proposed different models. The reasoning behind their classification is informed by three theoretical approaches that have been proposed to understand the European welfare states, the third sector and the market economy as a whole. These models posit different 'moorings' for sectors that involve deep-seated values and institutional dispositions, even though to different extents.

First, the Three Worlds of Welfare Capitalism approach (based on Esping-Andersen 1990; combined with Arts and Gelissen 2002) suggests different ideal-type welfare regimes according to the trajectories of different historical forces, as combinations of the different realisations of two fundamental dimensions: (1) decommodification and (2) stratification (seeTable 1).

Table 1.1: Decommodification and stratification

	Decommodification Low	Decommodification High
Stratification Low	Conservative Italy, France, Germany, Spain	Social-democratic Netherlands, Denmark, Sweden
Stratification High	Liberal United Kingdom, Ireland	(Post-socialist) Czech Republic, Poland, Estonia

(Based on Esping-Andersen 1990; Arts and Gelissen 2002)

Second, the Social Origins Theory (Salamon and Anheier 1998; Anheier 2010) suggests two central dimensions for a nonprofit regime typology to categorise four different nonprofit regimes. The dimensions are: (1) social welfare spending on the country level and (2) the size of the nonprofit sector. The classification is conceptually related to Esping-Andersen's notion of welfare state conceptions, but goes beyond it by stressing the role of the nonprofit sector (see Table 2).

Table 1.2: Government spending – scale of the nonprofit sector

	Government social welfare spending Low	Government social welfare spending High
Scale of nonprofit sector Small	Statist Czech Republic, Spain, Italy	Social democratic Sweden, Denmark
Scale of nonprofit sector Large	Liberal United Kingdom	Corporatist France, Germany, Netherlands, Spain

(Based on Anheier, 2010; Salamon and Anheier 1998; Salamon and Sokolowski 2004)

The Varieties of Capitalism approach (Hall and Soskice 2001) postulates that two main types of capitalism exist in developed countries (see Table 1.3). On the one hand there are the liberal market economies (LMEs), and on the other hand the coordinated market economies (CMEs). The main defining variable is the private sector's ability to act (in)dependently from government influence. In state-directed economies the degree of innovation is assumed to be rather evolutionary, while liberal market economies are supposed to be characterised by revolutionary innovations; this relates to industry-specific technological and comparative advantages (cf. Schneider and Paunescu 2012, p.732).

Table 1.3: State versus market dominance

State (-dominated) ←			Market (-dominated) →
CME	Hybrids	LME-like	LME
Germany, France	Italy, Czech Republic	Spain, Netherlands, Sweden	Denmark, United Kingdom

(Based on Hall and Soskice 2001; Schneider and Paunescu 2012)

While the different classifications are useful for many types of analyses, they fall short of exploring the characteristics of the foundation sector and thus the objectives, activities and overall importance of foundations across Europe. In this respect, and considering the empirical profiling of foundations in European countries, Anheier and Daly (2007) drew on these approaches in proposing the models below. They are meant to account for the context in which foundations are created and in which they operate.

Each model groups countries based on different relations between the state, the corporate sector, nonprofit organisations and the foundations themselves. These models may not only provide a framework of explanation for the different objectives, activities and importance of foundations, but they also serve to articulate the position of foundations and, thus, the specific opportunities and challenges they encounter in each country. These six models shape the subsequent analysis of developments in Europe's foundation sector:

- In the social democratic model foundations either complement or supplement state activities. The model assumes a highly developed welfare state in which foundations are part of a well-coordinated relationship with the state. Foundations are important, but their service-relative contributions in absolute and relative terms remain limited due to the scale of the welfare state. There are numerous smaller grantmaking foundations that have been set up by individuals, large companies and social movements over time. The borderlines between foundations and businesses are complex and fluid. Country examples: Sweden, Norway, Denmark, Finland.
- In the corporatist model foundations are in a 'subsidiary relation with the state' (Anheier and Daly 2007: 17). Here they are part of the social or educational system and many combine grantmaking and operative dimensions. Foundations are important as service providers, but less so in terms of their overall financial contribution. In this model, the boundaries between the state and foundations are complex. The corporatist model can be further distinguished into three subtypes:
    1. In the state-centered corporatist model foundations are closely supervised by the state. There exist only a few grantmaking foundations; foundations are primarily operating or quasi-public umbrella organisations. Country examples: France, Belgium, Luxembourg.
    2. In the civil-society centered corporatist model foundations are part of the welfare system. Grantmaking foundations are less prominent. There are complex boundaries between the state and foundations, as well as between foundations and private businesses. Country examples: Germany, Netherlands, Austria, Switzerland, Liechtenstein.
    3. In the Mediterranean corporatist model foundations are primarily operating. The development of grantmaking foundations is much less pronounced, and complex boundaries exist between foundations and the state on the one hand, and, for historical reasons, with established religion, especially the Catholic Church, on the other. Country examples: Spain, Italy, Portugal.
- In the liberal model foundations engage parallel to the state, 'frequently seeing themselves as alternatives to the mainstream and as safeguards of non-majoritarian preferences' (ibid: 17). Foundations are primarily grantmaking, whereas operating functions are less prominent today, and typically reach back to the Victorian era in the form of housing trusts or health and social providers. The boundaries between the state and private business are well-established. Country example: the United Kingdom.
- In the statist model foundations play a minor role both in terms of grantmaking and service provision, and for a variety of historical reasons that include the role of religion, patriarchy and long-standing immigration patterns in the context of recent economic development. The statist model can be further distinguished into two sub-types:
    1. In the peripheral model foundations primarily operate to compensate for the shortfalls of the provision of public goods by the public sector, but they do so at rather insufficient levels. Together, foundations have not reached the institutional momentum needed to become significant players. Country examples: Ireland, Greece
    2. In the post-socialist model foundations also play minor roles. Operating foundations are dominant and work in parallel to public agencies. There are only few grantmaking foundations. There are complex boundaries between the state and foundations, and between foundations and private business. Until the last decade, most philanthropic funds in the region came from either the United States or from Western Europe.

These models suggest that the prevalent institutional and legal environment is fundamental to the characteristics and development of foundations – along, of course, with other factors such as historical, economic and social aspects. The differences between these models are obviously not clear cut; but they are rather ideal-typical constructions or descriptions of a much more complex reality. Clearly, the applicability of the various models remains to be fully tested, and their validity is also an empirical question as it also depends on the policies and laws in place, as well as the changes that might occur.

Recent years have seen some substantial developments to which foundations have been reacting. These include the increasing levels of private wealth, the continued re-structuring of the welfare state which favours a reduced role for governments and a greater responsibility lodged with individuals and the enduring economic and investment crisis. Some of these change-inducing processes have been fuelled or amplified by EU-sponsored processes such as the current creation of a European Foundation Statue.

Conclusion

Foundations have grown in recent years, both in numbers and in assets, suggesting themselves as alternatives or complements to the instruments of the modern welfare state (European Foundation Center 2014). Economic prosperity and a (though varied) re-structuring of the welfare state are closely related to the overall rise of foundations. In recent years, given their resources, foundations have become more attractive options for the EU and its member States to secure and, in particular, to complement modern public policy goals and activities. The EU and its member States have played a favourable role in the growth of foundations by encouraging the establishment and operations of foundations at the national and European level through court decisions, regulations and policy guidelines.

This expansion, however, is not a foregone conclusion. Foundations also exist because markets and governments may fail, as Hansmann (1996) and Weisbrod (1988) have pointed out. They can provide goods and services that neither the state nor the market can deliver. But in most cases, they do what states, markets and nonprofit organisations can do as well – perhaps not as well, but at least in principle: provide social, health or educational services; and offer stipends to gifted people, support for the poor or the arts, and financial protection for the needy. It is in this context, that foundations make their truly distinct contribution to society: pluralism. By promoting diversity in thought, approaches and practice they enable innovations and secure the problem-solving capacity of society. The argument applies also for foundations that are active in the field of research and innovation. These fields compromise high risks and low pay-off undertakings that other potential funders or research institutions may not be willing to take on.

Moreover, foundations provide additional social and financial resources in a context where European public expenditure on research and development remains significantly lower than its American or Japanese counterparts (Eurostat 2014). From a public policy perspective there are therefore good reasons to promote the growth of foundations. Yet, as emerged in this short overview, we still know very little about foundations, in particular in the field of research and innovation. Better knowledge about the funding sources of foundations, their activities, their roles, their importance and the environment they work in can help encourage new political approaches to promote research and innovation on a member-state and EU-level.

1.3 Research and innovation performance in Europe

In 2000 The Lisbon strategy set the EU an objective of devoting 3 % of its gross domestic product (GDP) to R&D activities by 2010. Business was expected to account for two thirds of R&D investment, and the government the remaining third. Europe was to be turned into the most competitive knowledge-based society. However, due to the worldwide economic crisis the 3 % target was not reached by 2010, except for Finland, Sweden and Denmark. Subsequently, the 3 % target was maintained in the Europe 2020 Strategy, where 'smart growth' (developing an economy based on knowledge and innovation) is one of the priorities in the coming years [1].

1.3.1 R&D expenditure in Europe [2]

Gross domestic expenditure on R&D (GERD) [3] in the EU28 in 2012 accounted for EUR 266 898 million. There was an increase of 2.9 % compared to the previous year, or 42.9 % higher than 10 years before. In terms of expenditure as a proportion of GDP, also known as R&D intensity [4], the EU28 spent 2.07 % of its GDP on R&D. The business sector (1.31 %) accounted for the largest share (almost two thirds), followed by the higher education sector (0.49 %), the government sector (0.25 %) and the private nonprofit sector (estimation of 0.02 %).

Although the expenditure of foundations is covered in the EU R&D statistics, it is not possible to distinguish the funding part of foundations for research, development and innovation. Moreover, even on a national level systemised and aggregated data of foundations' contribution to the research arena is scarce [5]. This lack of data underlines the importance of the current study to map out the foundations' contribution in advancing research across the EU. It should be noted, however, that the EUFORI study is a first attempt at mapping out foundations' support for R&I. We should be cautious when trying to compare the economic data from EUROSTAT with the socio-political data derived from the EUFORI Study.

The EU compared to other parts of the world

Compared to countries like Japan (3.25 %, 2010 data) and the USA (2.67 %, 2011 data), the EU28 (2.07 %, 2012 data) is still lagging behind in terms of R&D intensity. This is mainly explained by the slow relative growth in business R&D expenditure. The R&D intensity of the business sector in the EU28 (1.30 %, 2012 data) is much lower compared to Japan (2.49 %, 2010 data) and the United States (1.83 %, 2011 data), while the relative importance of R&D expenditure in the government and higher education sector was broadly similar.

1 http://ec.europa.eu/europe2020/index_en.htm

2 This section in based on information and data from Eurostat. http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/R_%26_D_expenditure

3 GERD includes expenditure on research and development by business enterprises, higher education institutions, as well as government and private nonprofit organisations.

4 Research and development (R&D) intensity for a country is defined as the R&D expenditure as a percentage of gross domestic product (GDP), see http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Glossary:R_%26_D_intensity

5 EFC (2009). Understanding European Foundations. Findings from the FOREMAP project

Differences between EU countries

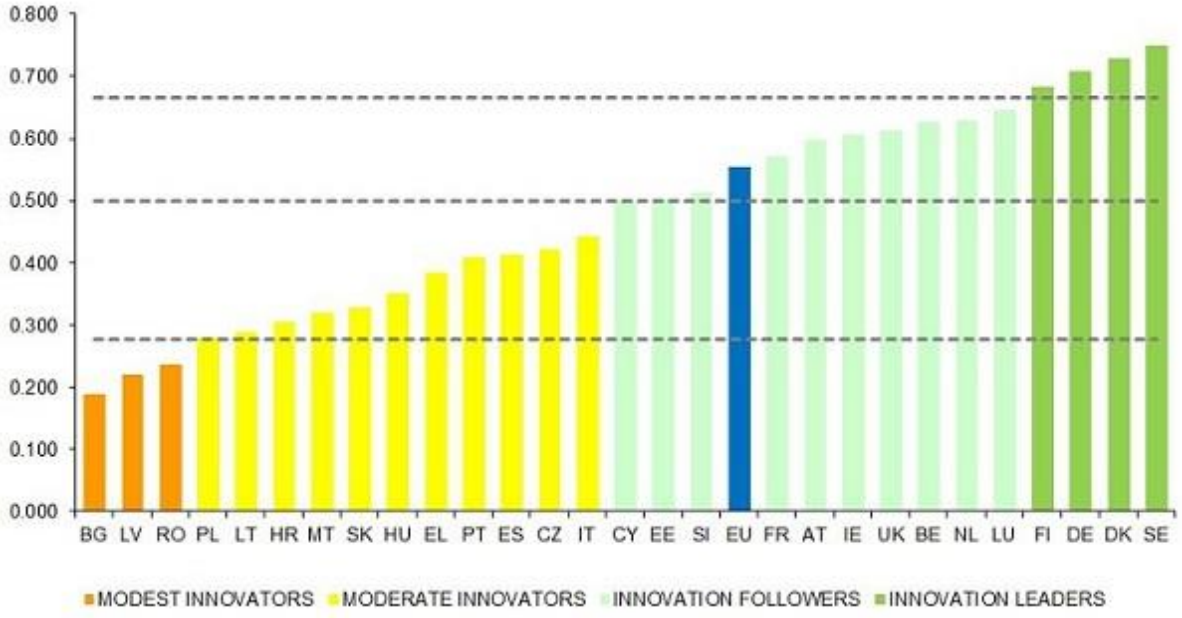
Among the EU Member States, Finland (3.55 %), Sweden (3.41 %) and Denmark (2.98 %) had the highest R&D intensities in 2012. The member States with the lowest R&D intensities were Cyprus (0.46 %), Bulgaria (0.64 %), Latvia (0.66 %) and Greece (0.69 %).

1.3.2 Innovation performance in Europe

Innovation is the main driver of economic growth and stimulates a faster recovery from the crisis [1]. In order to improve their performance in innovation the EU created the Innovation Union, a Europe 2020 initiative. This is the European Union's strategy to create an innovation-friendly environment that makes it easier for great ideas to be turned into products and services that will bring our economy growth and jobs [2].

The annual Innovation Union Scoreboard provides a comparative assessment of the research and innovation performance of the EU Member States and the relative strengths and weaknesses of their research and innovation systems (European Union, 2014) [3]. Based on the average innovation performance, the EU Member States fall into four different performance groups: modest innovators, moderate innovators, innovation followers and innovation leaders (see figure 1.1).

Figure 1.1. Innovation Union Scoreboard 2014



Source: Innovation Union Scoreboard 2014 [4], European Union, 2014

1 EU (2013) The Innovation Union. A pocket guide to a Europe 2020 initiative

2 http://ec.europa.eu/research/innovation-union/index_en.cfm

3 See also http://ec.europa.eu/enterprise/policies/innovation/policy/innovation-scoreboard/index_en.htm

4 The Innovation Union Scoreboard (IUS) 2014 uses the most recent available data from Eurostat and other internationally recognised sources, with data referring to 2012 for 11 indicators, 2011 for 4 indicators, 2010 for 9 indicators and 2009 for 1 indicator.

Switzerland and Norway (two European countries outside the EU participating in the EUFORI Study) fall into the groups of innovation leaders and modest innovators, respectively. Switzerland has confirmed its position as the overall innovation leader by outperforming all EU Member States for years. Countries with the highest innovation growth leaders were Portugal, Estonia and Latvia, whereas Sweden, the UK and Croatia recorded the lowest innovation growth rates. When looking outside the EU, the US and South Korea are placed as top global innovators.

1.4 Research design, definitions and structure of the report

Research design

In order to achieve the objectives of the EUFORI Study the research project consists of the following stages [1]:

Building a network of national experts

The EUFORI Study has been carried out by a network of researchers, foundation officers and scholars from 29 European countries. Most researchers are members of the European Research Network on Philanthropy (ERNOP). ERNOP was founded in January 2008 by collaborating philanthropy researchers in Europe in order to advance, coordinate and promote excellence in philanthropic research in Europe. Currently almost 150 researchers in more than twenty European countries have joined ERNOP [2].

The identification of R&I foundations in Europe

An important goal of the EUFORI Study is to identify and build a comprehensive contact database of foundations supporting research and innovation in all the member States. Following the strategy suggested in the FOREMAP study, the EUFORI Study used data from existing registers and snowball sampling to build a comprehensive contact database of foundations supporting research and innovation.

National survey among the identified foundations

In order to assess foundations' financial support and policies for research and innovation, data collection was carried out among the identified foundations in each country by means of an online survey. The survey questions were structured along the following topics: types of foundation, sources of income, assets, expenditure on research and innovation, type of support, focus of support, geographical dimensions of activities, foundations' operations and practices, and the role of foundations in the area of R&I. [3]

Interviews with foundation professionals

To contextualise the findings from the quantitative study, additional interviews with foundation professionals were crucial to get a more in-depth understanding of the foundations' activities and their impact on the research/innovation arena.

1 For a more extensive description of the methodology, research design, research tools and scope of the study is referred to the methodology section in annex II

2 See www.ernop.eu

3 The full questionnaire can be found on the website: www.euforistudy.eu

Concrete examples of innovative practices

The identification of innovative and successful examples of research and/or innovation projects with a major impact on the field enables the sharing of best practice between Member States. Innovative examples will enrich and illustrate the findings from the survey.

Defining foundations, research and innovation for the purpose of this study

The definitions used in this study are as follows:

Foundation

There is no common legal definition of a foundation across the EU, as definitions in national laws vary considerably [1]. The term 'foundation' in Europe can have different meanings due to diverse cultures, historical contexts and legal/fiscal frameworks. Nevertheless, across the foundations in Europe there is a general understanding of what public benefit foundations are, illustrated by a couple of common key features. For the purpose of this study the following functional definition [2], as stated by the European Foundation Center and its members, has been used:

'Independent, separately-constituted non-profit bodies with their own established and reliable source of income, usually but not exclusively, from an endowment, and their own governing board. They distribute their financial resources for educational, cultural, religious, social or other public benefit purposes, either by supporting associations, charities, educational institutions or individuals, or by operating their own programs'.

Research

For the purpose of this study 'research' includes basic and/or applied research projects or programmes covering all thematic aspects of science, technology from social science, the humanities, engineering and technology, to natural science, agricultural science and medical science (including clinical trials phases 1,2,3).

Research-related activities are also covered. These include support for projects/programmes on researcher mobility (career structure and progression), knowledge transfer (including intellectual property rights/patents), civic mobilisation or advocacy (trying to change social opinions and/or behaviors regarding science, including promoting science-related volunteering, or promoting researchers' rights and social status), infrastructure (laboratories, research centres, pilot or demo plants), the dissemination of research (seminars, conferences, etc.) and science communication (museums and science parks).

1 See http://ec.europa.eu/internal_market/company/docs/eufoundation/feasibilitystudy_en.pdf

2 European Foundation Centre 2007. Foundations' legal and fiscal environments. Mapping the European Union of 27. Brussels: European Foundation Centre.

Innovation

The definition of 'innovation' used in EUFORI Study is based on the definition of the Innovation Union: 'The introduction to the market of a new product, methodology, service and/or technology or a combination of these aspects'.[1]

The study primarily focuses on research and innovation (R&I) foundations, which means foundations whose primary objective is to support R&I. Secondly, the study focuses on foundations that partly support R&I, such as foundations that are active in the area of health or in social, economic and political areas and a significant aspect of their budget is focused on research and innovation.

Structure of report

This synthesis report presents and discusses the findings from the EUFORI Study, based on the data from 29 different countries; 27 EU countries, as well as Norway and Switzerland. For more information we refer to the national reports.

The first introductory chapter sets the stage for the report by discussing the background and relevance of the EUFORI study. In Chapter 2 the main results for the different themes will be discussed. The results will be presented for the total group of foundations, which will be enriched by concrete examples of individual countries/foundations. Chapter 3 focusses on a comparative analysis between the countries. What are the differences between the countries in terms of the R&I performance of foundations and how can these be explained? Chapter 4 outlines the strengths and weaknesses of European foundations supporting R&I. Common patterns in the strengths and weaknesses of foundation sectors throughout Europe are discussed, as well as examples on an organisational level from the national reports. The fifth and concluding chapter reviews the key findings and discusses the main issues that have arisen in the report. The trends and the potential for future developments in this sector will be identified. Taking into account the internal and external factors that influence the performance of R&I foundations in Europe, in Chapter 6 recommendations will be put forward for the future development of this sector.

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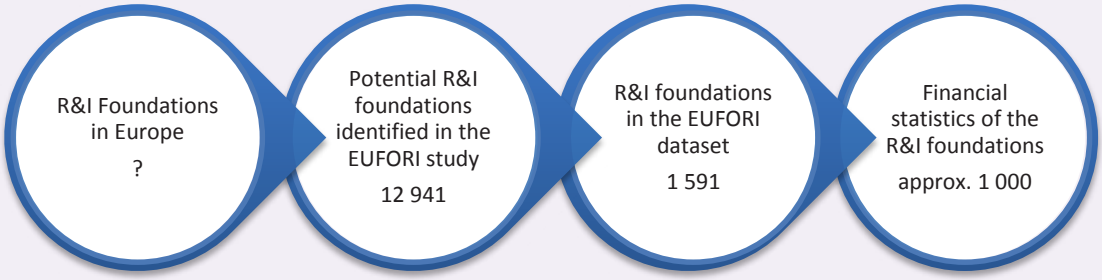
2 Sketching the landscape of foundations supporting R&I in Europe

In this chapter the landscape of foundations supporting research and innovation in Europe will be outlined. With survey responses from 1591 foundations in 29 countries the EUFORI study provides a unique quantitative perspective on the activities of European foundations supporting research and innovation. The goal of this chapter is to present the main results and findings of the total group of foundations participating in the study. For comparative purposes, the European foundation landscape is 'sketched' by making use of the same themes and figures that were presented in the national reports. The quantitative information generated by the data is explained and enriched with illustrative examples from the national reports from individual countries and foundations. Although the focus in Chapter 3 will be on the comparative analysis, in Chapter 2 we will also report some descriptive country differences of the main financial statistics, which are depicted in comparative figures.

Box 1 Identification of foundations supporting R&I in Europe



An important goal of the EUFORI Study is to identify and build a comprehensive contact database of foundations supporting research and innovation in all the Member States. Due to a lack of systemised and exhaustive data on foundations in many countries the total number of foundations active in the area of research and innovation in Europe is unknown. Following the strategy suggested in the FOREMAP study, the EUFORI Study used data from existing registers and snowball sampling to build a comprehensive database of foundations supporting research and innovation. It turned out that the identification of foundations supporting R&I in Europe was a challenging one. Even in countries with a register or database it was still not easy to create lists, as the databases were not always up to date. The national experts identified more than 12 000 foundations which potentially support R&I. We deliberately say 'potentially' as the sample might be blurred by the inclusion of non-existing or non-active foundations.

Online survey

A total of 12 941 foundations, expected to have research and/or innovation in their mission, received an online questionnaire addressing different kind of topics: income, expenditure, focus of support, partnerships, grantmaking policy etc. Detailed information on the response of foundations in the survey can be found in the methodology chapter (annex II). The process of data collection and data cleaning ended with a EUFORI dataset containing information from 1 591 foundations supporting R&I. Financial statistics like income, assets and expenditure were collected from approximately 1 000 foundations as the foundations were sometimes reluctant or not able to provide financial information.

As a matter of fact, the EUFORI Study does not include (figures of) all the foundations supporting R&I in Europe. However, it should be noted that the national experts gathered information about the most substantial part of the R&I foundation sector.

2.1 Types of foundations supporting R&I

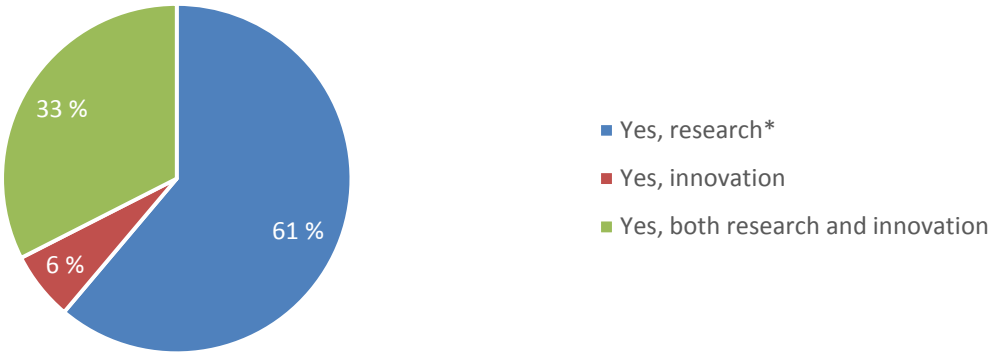
Europe is characterised by a rich tapestry of foundation types representing diverse philanthropic traditions, historical and legal contexts. Foundations supporting R&I range from some very well-known large ones with well-developed grantmaking programmes (e.g. the Wellcome Trust in the UK and the Volkswagen Stiftung in Germany) to small foundations with modest resources and few or no full-time staff (e.g. the Uyttenboogaart-Eliasen Foundation which supports entomological research in the Netherlands). There are a number of ways to categorise foundations supporting research and innovation. Classifications can be made according to the type of founder (private individuals, corporations, nonprofit sector, public sector), modes of operation (grantmaking, operating, mixed), revenue structure (single or multiple funding sources), purpose (single or multiple purposes) and by year of establishment, just to name a few examples.

In this section we examine whether the foundations selected for the EUFORI Study focus on the promotion of research, innovation or both. Moreover, we outline what proportion of foundations is primarily focused on the support of R&I and what proportion of foundations support other purposes as well. What can we say about foundations' activities in terms of grantmaking and/or operating? Finally, we end this section with an overview of the year of establishment of the EUFORI foundations.

2.1.1 Research, innovation or both?

Foundations contributing to research and/or innovation are mainly interested in supporting research. 61 % of 1 591 foundations claim to support research only. Only 6 % of foundations exclusively focus on innovation and one third (33 %) of foundations claim to support both research and innovation.

Figure 2.1: Types of foundation; research and/or innovation
As a percentage of the total number of foundations (N=1591)

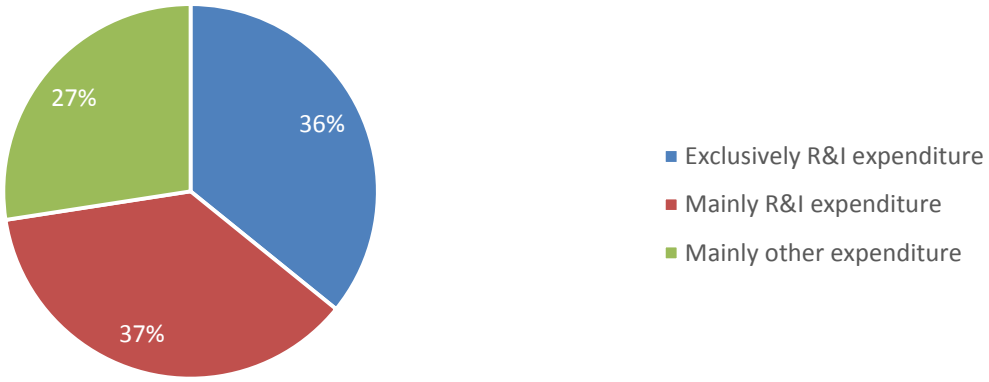


*Also includes research-related activities as will be discussed in paragraph 2.4.

2.1.2 Exclusively R&I or other purposes as well?

When compared to other focus of support areas, the focus of foundations on research and/or innovation is depicted in Figure 2.2. Overall, the distribution is as such that roughly one third of foundations (36 %) focus exclusively on research and/or innovation. 37 % of foundations focus mainly on R&I (meaning that 50-99 % of their total expenditure is directed towards R&I), and the remaining 27 % indicate their support for mainly other purposes (less than 50 % of total expenditure goes to R&I). The biggest spenders on R&I are represented in the red part of the pie (the 'mainly R&I' group); these foundations represent 65 % of the total expenditure on research and innovation. while the 'exclusively R&I' group and the 'mainly other purposes' group, account for 23 % and 12 %, respectively.

Figure 2.2: Types of foundations according to purpose
As a percentage of total number of foundations (N=1097)



Approximately two thirds of the EUFORI foundations are not exclusively focused on R&I. Some of these foundations do not even consider themselves as a research and innovation foundation. From the national reports it becomes apparent that within this group of foundations two types might be distinguished. For the first type of foundation research is a purpose next to other purposes; the support for research is part of a foundation's policy, it has a structural character, and the financial means for research are earmarked as such. For the other type of foundation, research activities are seen as supportive of projects in other categories such as international development, engineering or social services. Research is used as a tool/ instrument within other projects. The support for research is instead on an ad hoc basis and the financial means for research are not specifically earmarked as such.

The first group of foundations is most likely represented in the red category (50-99 %). This concerns, for example, big health foundations such as the Dutch Cancer Foundation (KWF Kankerbestrijding). They spend a considerable amount of their total expenditure on research each year, yet have other purposes like patient care. The second group is most likely represented in the 'less than 50 % category'. An exception is, however, the Gulbenkian Foundation, which spends less than 50 % of its total expenditure on research, which is a considerable amount of money, given the total budget of this foundation.

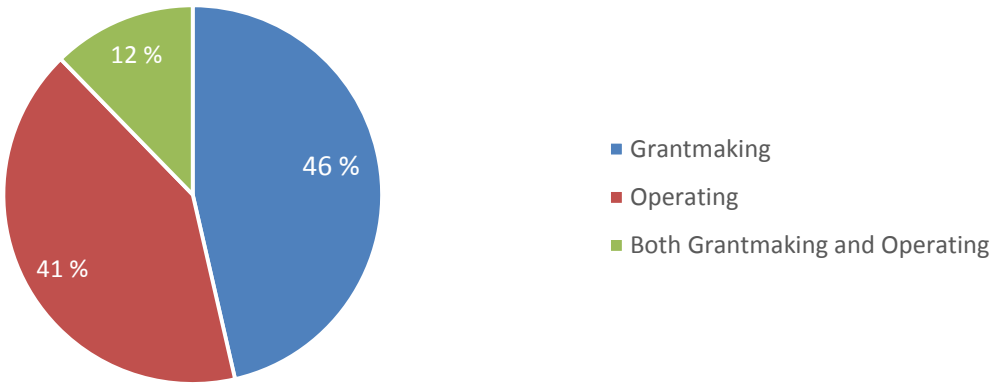
2.1.3 Types: Grantmaking versus operating

In the academic literature, one of the foundation typologies is based on the activities of the foundations. A foundation can be, among others, grantmaking, operating, or it could focus on both (mixed foundations). Historically, European foundations were predominantly of the operating kind, with their own programs and projects and with a clear service delivery function (FOREMAP 2009: 17). Examples of these foundations are schools, hospitals and universities (Anheier 2001: 4). Grantmaking foundations are a much more modern 'invention', with their introduction in the 19th and 20th centuries. These foundations are often endowed foundations engaged in making grants for specific projects/purposes (idem: 4). In the US many (large) grantmaking foundations were established in the postwar period due to the accumulation of private wealth, making these foundations typical for the US foundation landscape. In Europe, the same wealth accumulation occurred, thus boosting the number of grantmaking and mixed foundations, but here the foundation landscape is much more diverse as the operating type remains quite popular as well (FOREMAP 2009: 17).

The boundary between grantmaking and operating foundations can be fairly indistinct. In some countries there are clear legal boundaries between the two types, whereas in other countries the situation is more complex. The typology between grantmaking and operating should therefore be understood as a functional typology, based on how foundations perceive their activities, instead of a legal one (Toepler, 1999: 174).

In the EUFORI study, foundations were asked whether their activities are mainly grantmaking or operating (or both). 1 490 foundations provided insight in their type of activities. 47 % of the foundations claimed to be grantmaking only, whereas 41 % of the foundations claimed to carry out just operating activities. The remaining 12 % of the foundations are mixed foundations involved in both grantmaking and operating activities. The EUFORI results confirm that operating foundations are indeed an important feature of the European foundation landscape and still represent a large share of the foundations contributing to research and/or innovation. A well-known operating foundation in this area is Institut Pasteur in France. Grantmaking foundation examples include Alzheimer's Research in the UK, Stiftelsen Riksbankens Jubileumsfond in Sweden and Volkswagen Stiftung in Germany. The Calouste Gulbenkian Foundation in Portugal and the Caixa Foundation in Spain (mixed foundations) carry out their own research programs and give grants to other organisations as well.

Figure 2.3: Types of foundation; grantmaking versus operating
As a percentage of the total number of foundations (N=1489)

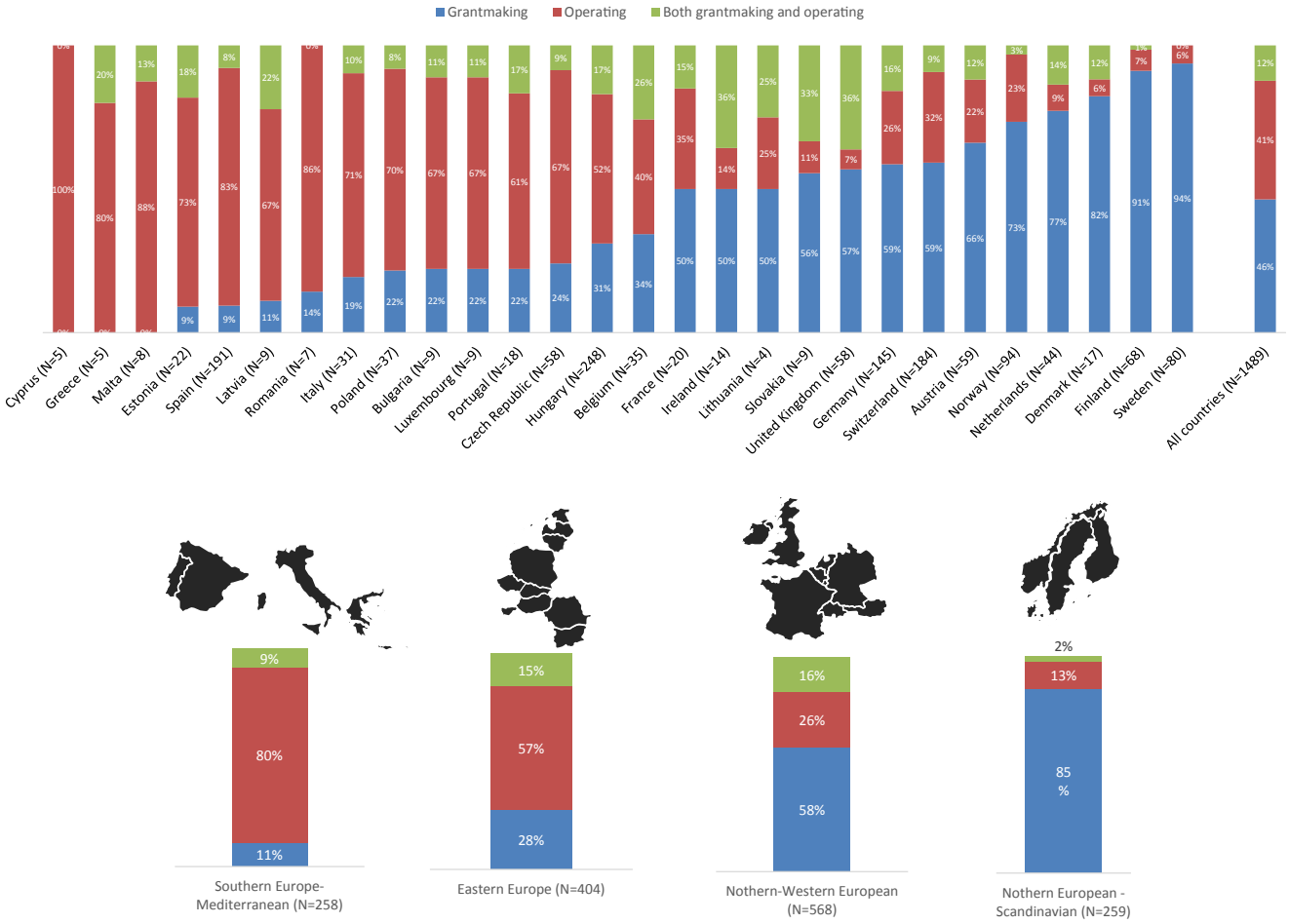


In terms of size, there are interesting differences between the types of foundation. Operating foundations in the EUFORI dataset seem to be much smaller in terms of assets, income and expenditure than their grantmaking counterparts. The average foundation with an exclusive focus on grantmaking activities has an annual income of EUR 21 million, whereas the average operating foundation has an annual income of EUR 5.7 million. There are only 183 mixed foundations in the dataset, but on average this type has the highest income with EUR 28.6 million Euros, which exemplifies that many of the larger foundations in the EUFORI data are foundations that are active both in operating programs and in making grants.

When we look at the division of grantmaking and operating foundations throughout Europe (see Figure 2.4) we can see that the distribution is more complex than is depicted in Figure 2.3. In fact, there are large differences between countries. In countries such as Spain and Estonia the percentage of grantmaking foundations is quite low with less than 10 %. Their share of operating foundations is consequently very high with more than 80 % of foundations operating their own programs. At the other end of the spectrum we find mainly Scandinavian countries with high shares of foundations that focus exclusively on making grants. For both Finland and Sweden the percentage for grantmaking foundations is more than 90 %. The distinct position of these Scandinavian countries suggests a certain regional clustering, as shown in Figure 2.4. Here it becomes apparent that the pattern found in Spain is also present in the other Mediterranean countries, albeit to a lesser extent. In Eastern Europe the contrast is less high but here too the operating foundations easily outnumber the grantmaking foundations. Moving to the north-west of Europe, the division is vice versa, with the majority (58 %) being made up of grantmaking foundations.

The regional division made here is quite arbitrary and the number of observations for each region is not even, which must be taken into account. The clustering shows that groups of countries certainly resemble each other when it comes to the operating/grantmaking divide, but the main conclusion is that there is a typical European diversity between countries and regions when it comes to the presence of operating and grantmaking foundations.

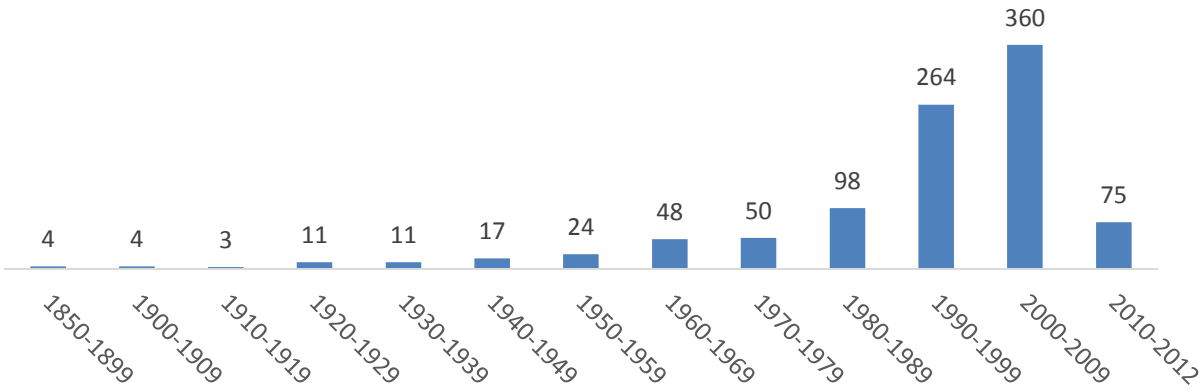
Figure 2.4: Operating versus grantmaking foundations according to country



2.1.4 Year of establishment

Nearly three quarters (72 %) of the foundations supporting R&I have been established since the year 1990. This especially holds true for Eastern European countries, where it was not possible to set up a foundation under the Communist regimes. After the fall of Communism the growth of new foundations started gradually in these countries. In the UK, however, there is a much longer history of foundations supporting R&I. 40 % of the UK foundations in the EUFORI sample were established before 1949.

Figure 2.5: Year of establishment according to decade
Number of foundations according to decade (N=969)

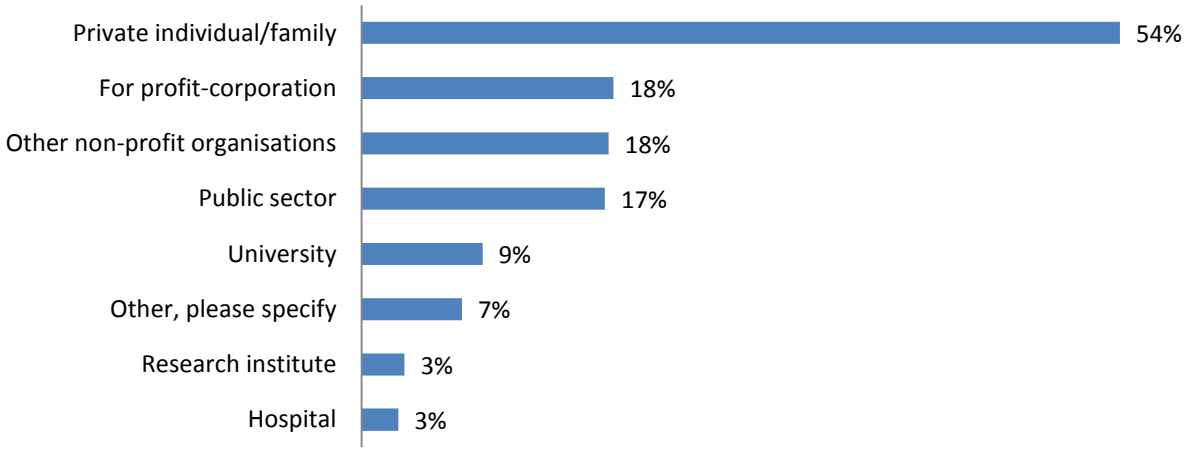


2.2 Origins of funds

2.2.1 Financial founders

The majority of foundations in the sample were (financially) set up by private individuals/families (54 %). Examples of these foundations can be found all across Europe. The Willy Scharnow-Stiftung für Touristik (Willy Scharnow Foundation for Tourism [1]) was founded by Willy Scharnow, one of the founders of TUI. The aim of the foundation is to bring people and nations closer by providing grants to scholars in the tourism sector. Individuals are followed by for profit corporations, which play a role in 18 % of the foundations that are active in R&I. Other nonprofit organisations (18 %) and organisations from the public sector (17 %) are also mentioned frequently as financial founders. Universities (9 %), research institutes (3 %) and hospitals (3 %) are named much less frequently.

Figure 2.6: Financial founders
As a percentage of the total number of foundations, multiple answers possible
(N=1151)



It should be noted, however, that in most countries, no initial starting capital for foundations is required by law. On the other hand, there are countries where the authorities require that the foundation possesses a sufficient amount of capital to fulfil its purposes. In the last category, we find countries where start-up capital is required by law. According to the EFC, this is the case for Austria (for private foundations), the Czech Republic (not for endowment funds), Denmark, Finland, Malta, Romania, Slovakia and Spain. A special case is France, where, in practice (not required by law), start-up capital of up to EUR 1 million may be required by the authorities. Other countries such as Bulgaria, Cyprus, Estonia, Ireland, Latvia, Lithuania, the Netherlands, Poland, Slovenia, Sweden and the UK (charitable companies) do not require a minimum capital (European Foundation Centre, 2011). In these countries in particular, the legal founder of a foundation could be different from the founder that provided the initial funds to start that foundation. In other words, for foundations in some countries it was therefore not possible to distinguish the legal founder from the financial founder.

1 See www.willyscharnowstiftung.de

In most cases, these foundations are set up by individuals alone. If they do collaborate with others in setting up a foundation, for-profit corporations and other nonprofit organisations are named most frequently. Compared to individuals, for-profit corporations form alliances more regularly. Private individuals/families are mentioned as partners in founding a foundation, but also the public sector and other nonprofit organisations can be found as combined founders. Furthermore, if we regard the relatively small number of universities that were mentioned as financial founders (99), it is interesting to note that 27 foundations were financially set up by a combination of at least one for-profit corporation and a university.

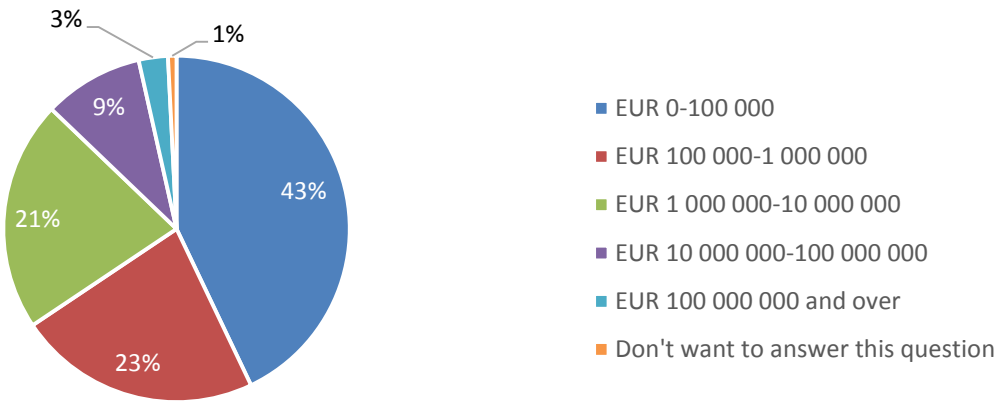
A number of examples of foundations that have been financially set up by a for-profit corporation and a university can be found in Spain. For example, the CTAG Foundation [1] aims to make automotive companies more competitive through the implementation of new technologies and the encouragement of research, development and innovation. But also the CIRCE foundation, founded by the University of Zaragoza, the Endesa group (known for Enel, one of Europe's largest utility companies), and the authorities of Aragon make up an example of a joint initiative, aimed at creating and developing innovative solutions and scientific/technical knowledge and transfering them to the business sector in the energy sector [2].
Among the most popular combined founders of foundations, we find public sector organisations and other nonprofit organisations. Out of the 1 151 respondents that answered this question, 161 mentioned another nonprofit organisation as the co-founder of their foundation, and public sector organisations were mentioned 160 times. The abovementioned CIRCE Foundation can be regarded as an example where a public organisation acted as a joint (financial) founder. For other further examples, please refer to the country reports.

1 See www.ctag.com

2 See www.fcirce.es

2.2.2. Income

Figure 2.7: Total income according to categories in Euros, 2012
As a percentage of total number of foundations (N=1137)



Statistics income	
Number of foundations	1 134
Mean in Euros	15 993 318
Median in Euros	225 775
Total income in Euros	18 136 422 342

As shown in the above figure, we find that the distribution of income from foundations is highly skewed. The landscape of European foundations supporting research and innovation consists of a large number of small foundations in terms of annual income. To be more specific, two out of three foundations have an annual income of less than EUR 1 million per year, and 43 % of the foundations have an annual income of less than EUR 100 000. The skewness of the distribution in income becomes clear if we take a look at the difference between the average amount of income and the median amount. The mean income of the foundations in the sample is almost EUR 16 million, compared to EUR 225 775 for the median.

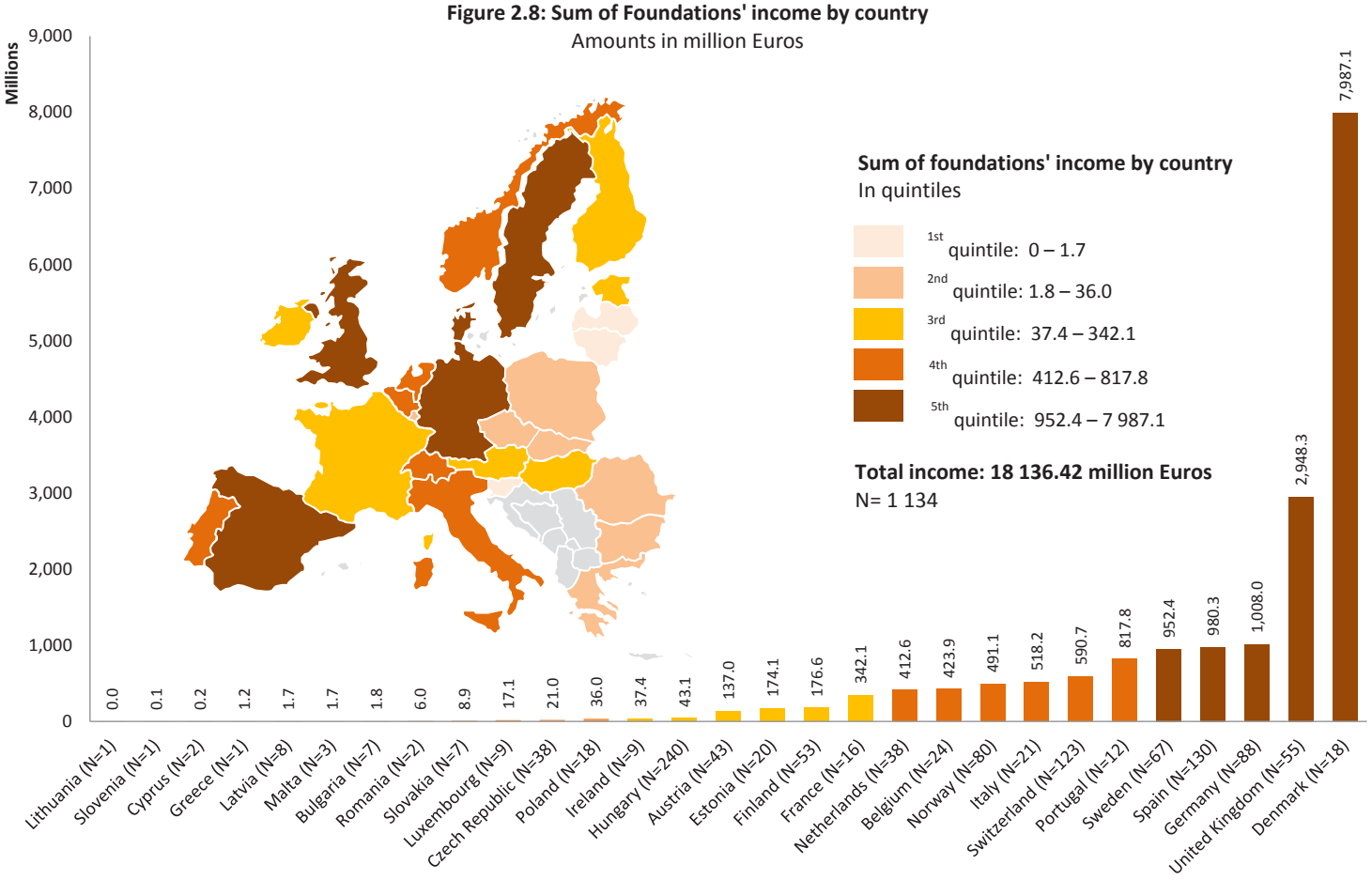
In Figure 2.8 the foundations' combined income according to country are presented. The countries are divided into quintiles and the absolute aggregate amounts are presented in the ascending bar chart. When we compare the amounts with each other a few observations can be made. First of all, the skewness that was visible between the different income categories can also be found between countries, as illustrated by the large differences. In the top quintile the most notable anomaly is the combined income of the Danish foundations with nearly EUR 8 billion. It is worth noting that there are only 18 Danish foundations that reported on their income which implies that their average income is EUR 444 million Euros. This high average income can be explained by the selection of Danish foundations for this study as only the largest foundations in terms of equity were included in the study.

Other countries in the highest quintile are the United Kingdom, Germany, Spain and Sweden. Together, the Danish and British foundations account for more than half of the total income of all foundations in the EUFORI data.

A second distinctive feature arises from the geographical representation of the quintiles. The highest quintiles mainly contain countries from the northern, western and southern European regions. The Eastern European countries are mainly represented in the 1st and 2nd quintiles. This regional division also recurs in the country comparisons of foundations' assets and expenditure and seems to be a legacy of their Communist period, when foundations were generally abolished and it was not possible to set up new foundations.

Notable exceptions in the regional distribution are Hungary and Estonia, which are the only Eastern European countries present in the 3rd quintile. In Hungary this ranking is caused by the high number of Hungarian foundations that originate from a rich philanthropic tradition and a large nonprofit sector. The position of Estonia, on the other hand, can mainly be explained by two foundations that together are responsible for 84 % of the total income of Estonian foundations.

Figure 2.8: Sum of Foundations' income by country
Amounts in million Euros



From the collected data, we find that 3 % of the foundations have an income of more than EUR 100 000 000. Most of these multi-million foundations can be found in the United Kingdom (8) Denmark (5) and Germany (4), but in most European countries there are only one or two of these big foundations, and in most countries they are even absent. Two Danish industrial foundations (see the country report on Denmark for a detailed description of industrial foundations), namely the pharmaceutical-based Lund

beckfonden (or Lundbeck Foundation) and the insurance company Trythedsgruppen (or Tryg Foundation), reported an income of EUR 3.8 billion and EUR 3.0 billion and are by far the largest foundations in terms of income.

Sources of income

European foundations in the area of research and innovation get their income from a variety of sources. In Europe, 63 % of the foundations can be regarded as 'classic foundation'. By classic foundation, we mean that they derive (part of) their income from the proceeds of endowments or funds. Indeed, proceeds from an endowment are by far the most common source of income of foundations. It is interesting to notice that there is no other source of income that stands out in terms of being frequently mentioned by the foundations in the EUFORI study sample. Income from government, be it structural or contractual, is only mentioned 4 % more frequently than income from service fees and/or sales. Moreover, donations from individuals are mentioned by 31 % of the respondents as a source of income, and donations from corporations by 29 %. Only, donations from other nonprofits are less common, as they are mentioned by 18 % of the respondents.

While 29 % of the foundations in the study claim to have received income from corporations, these donations only account for 5 % of the total (known) income. Even greater is the difference for donations from other nonprofit organisations, which were reported by 18 % of the foundations, but account for only 1 % of the amount. This indicates that the amounts acquired from these sources of income are small.

A small minority of the foundations name 'other' as a source of income. Sources of income that are mentioned under this category are diverse. For example, some income is derived from renting out property. This category of 'other' income was mentioned in particular by German foundations. Other sources of income that were mentioned were subscriptions (which might not fall under service fees and/or sales), income from lotteries or actions by third parties (e.g. in the Netherlands), and income derived from tax facilities (e.g. in Hungary).

Figure 2.9: Sources of income
As a percentage of total number of foundations (N=1378)

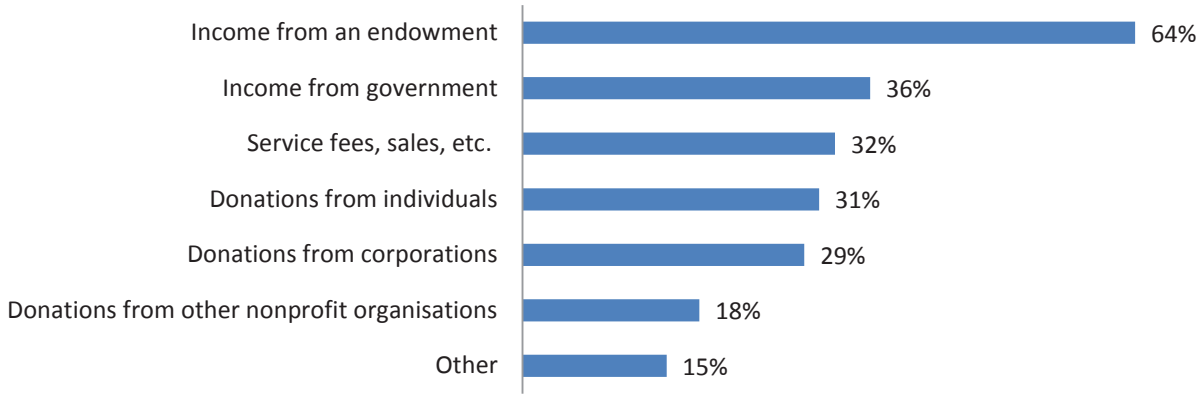
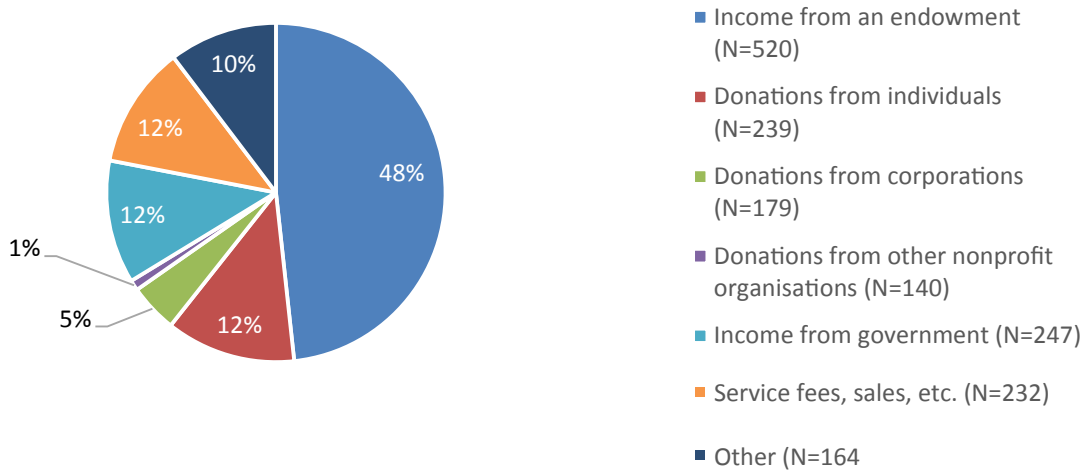


Figure 2.10: Sources of income
As a percentage of total (known) income



Source of income	Amount in Euros
Income from an endowment (N=518)	6 380 795 156
Donations from individuals (N=237)	1 636 499 264
Donations from corporations (N=178)	611 576 178
Donations from other nonprofit organisations (N=140)	133 832 145
Income from government (N=247)	1 561 463 166
Service fees, sales, etc. (N=231)	1 538 062 507
Other (N=164)	1 364 658 067
Unknown	4 914 318 229
Total income	18 141 204 713

Income from an endowment

As previously stated, income from an endowment was mentioned by 64 % of the respondents in the EU-FORI Study sample. Also, if we look at the amounts of income that are derived from the different sources of income, endowments account for the largest share of foundations' income. Named by 518 of the respondents, proceeds from endowments account for 48 % of the total amount of the known income of European R&I foundations.

Among the foundations that derive income from an endowment, we see differences in the source of the endowment and the way they treat the endowment. Foundations can have one or multiple financial founders, but they can also have one or more sources of endowment. The majority of foundations that derive income from an endowment were endowed by a donation of money from the initial founder. These foundations may have received a large sum of money, most commonly from private individuals or families, or from a for-profit company. The Vienna Science and Technology Fund is an example of the latter, which

received its original endowment from an Austrian bank [1]. A foundation that received its endowment from an individual is, for example, the Germany-based Gerda Henkel Foundation.

The Gerda Henkel Foundation was established in June 1976 by Lisa Maskell in memory of her mother Gerda Henkel. The sole object of the Foundation is to promote science at universities and research institutes, primarily by supporting specific projects in the field of the humanities that have a specialist scope and are limited in terms of time [2]. A special concern of this Foundation is the advancement of postgraduates. The foundation is active both inside and outside Germany. As well as a direct financial donation, Lisa Maskell also donated a part of her Henkel shares to the Foundation, together with real estate. Today, 81 % of the asset value of the Foundation is based on the value of the Henkel shares.

Another frequently mentioned source of an endowment is a bequest or legacy. Another German foundation serves as an example of how a legacy may become a source of income for a foundation. As founder of the German newspaper 'Die Zeit', Gerd Bucerius founded the ZEIT-Ebelin and Gerd Bucerius Foundation and left his entire fortune to it. Today, the Foundation has assets of more than EUR 766 million and donates around EUR 10 million per year to research [3].

Most foundations are created in perpetuity. These foundations only use the income from their capital to support their activities or to fund their projects and keep the original endowment to generate income. In the EUFORI Study, 482 respondents indicated that their endowment was created in perpetuity. However, this does not necessarily mean that the endowment should remain stable. On the contrary, 203 respondents indicated that the endowment was expandable at the trustees' discretion, while 107 respondents answered that it was possible to spend down their endowment.

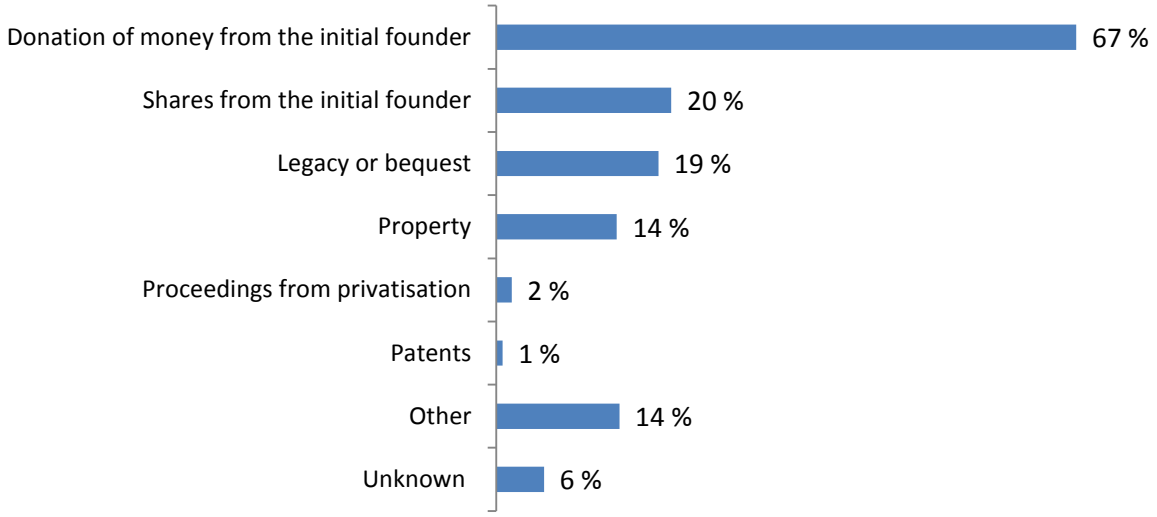
However, it must be noted that a large percentage of the total income of the foundations could not be categorised by the respondents. Out of the reported EUR 18.1 billion of income, slightly more than EUR 4.9 billion could not be categorised. A possible explanation could be that the respondents were not able to classify their sources of income in monetary terms, but also that these respondents were not willing to disclose this information. Nevertheless, out of the remaining EUR 13.2 billion, 48 % is thus from the proceeds of endowments. Hence, contrary to the classic private foundation where proceeds from endowments form the single source of income, most income from R&I foundations in Europe come from other or multiple sources of income.

1 See www.wwtf.at

2 See www.gerda-henkel-stiftung.de

3 See www.zeit-stiftung.de

Figure 2.11: Origins of endowments
As a percentage of the total number of foundations (N=668)



Income from government

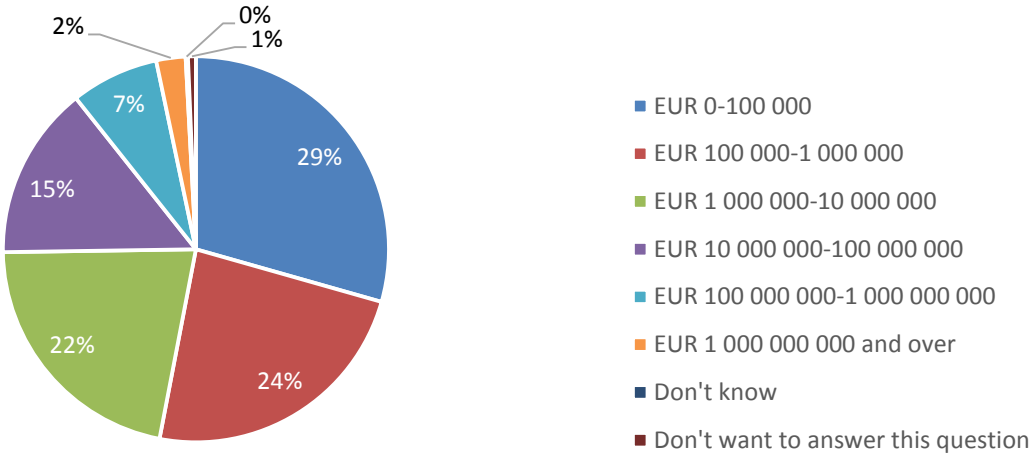
Another source of income that deserves attention is income derived from the government. Around 36 % of the foundations receive money from their government, with a total of slightly over EUR 1.5 billion. For some foundations, income from the government forms by far the most important source of income. Moreover, although these foundations are independent, it seems that for a very small percentage the government has a major influence on the decision-making process concerning the allocation of the foundations' R&I funds. The foundations were asked to scale the influence of the government on their decision-making processes with a number from 0 (not influential) to 10 (totally influential). About 20 % of the 310 foundations receiving government money reported that the government has an influence (a scale of 6 and higher) on the decision-making processes. 18 foundations reported that the government is highly influential regarding their decision making. The goal of the EUFORI Study is to map out the contributions of independent foundations to research and innovation in the EU. If a foundation were nothing more than a conduit for government subsidies, the degree of independence of these foundations could be seriously questioned.

2.2.3 Assets

From the EUFORI study we find collective assets of nearly EUR 127 billion based on the financial data of 1 052 foundations contributing to research and innovation. This number should be considered as a lower bound estimate since not all foundations participating in this study provided information on their financial assets. On the other hand, information on the assets of the largest foundations contributing to R&I has been included, thanks to additional information from publicly available annual reports. What does this lower bound tell us about the economic weight of these foundations? Estimations of the collective assets of European foundations are quite rare, but the Heidelberg Centre for Social Investment reported in their Feasibility Study on a European Statute (2007) that the total assets of European (EU27) foundations range between EUR 350 billion and EUR 3 trillion. This is a rough estimate, but it demonstrates that the economic weight of the assets of foundations participating in the EUFORI study is very substantial. Consid

ering that the EUFORI data only feature a subset of all the European foundations and, moreover, that only a part of these foundations participated in this study, the reported EUR 127 billion is quite high.

Figure 2.12: Total assets according to category in Euros, 2012
As a percentage of total number of foundations (N=1058)



Statistics Assets	
Number of foundations	1 052
Mean in Euros	120 467 020
Median in Euros	765 989
Total assets in Euros	126 731 305 534

In terms of assets, there is quite some variation in the size of foundations in the EUFORI dataset (see Figure 2.12). The majority of foundations (53 %) are smaller foundations with an asset value of less than EUR 1 000 000. Nearly 10 % of the foundations report an asset value of over EUR 100 000 000. These top 10 % foundations consist of 102 foundations that together are responsible for 95 % of the EUR 127 billion reported in the EUFORI study.

Figure 2.13: Types of assets
As a percentage of the total number of foundations (N=734, multiple answers possible)

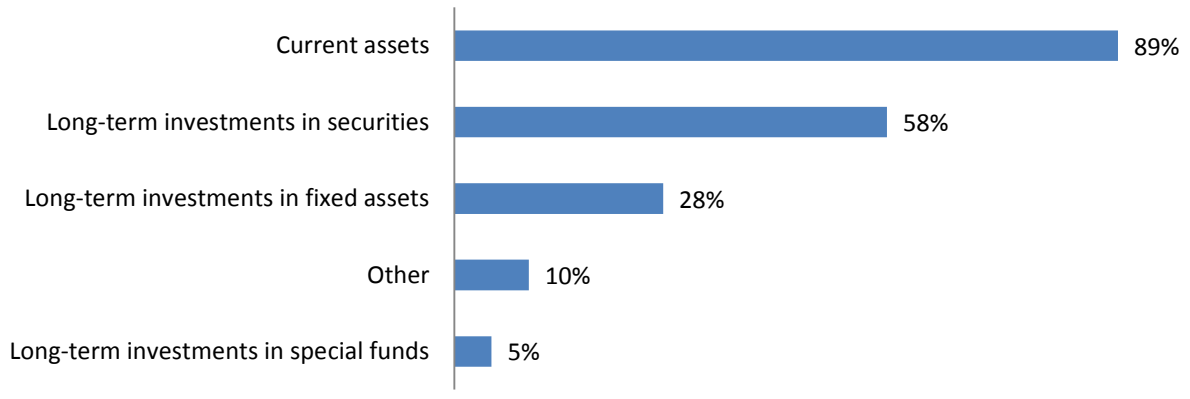
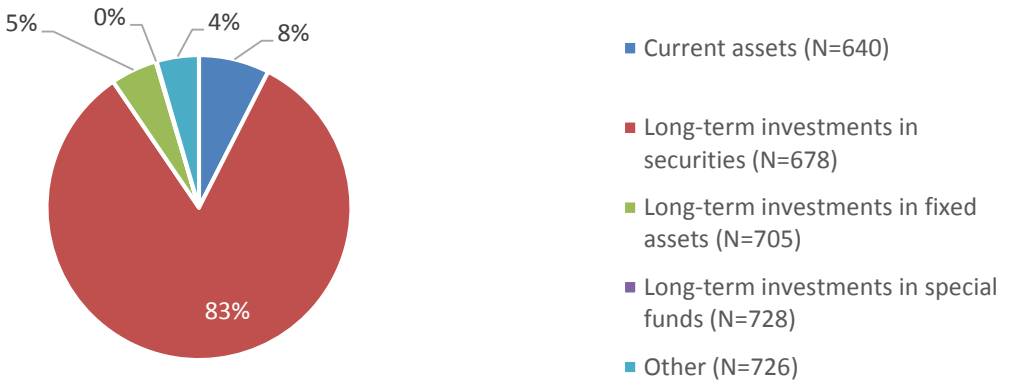


Figure 2.14: Distribution of Assets
As a percentage of total (known) assets



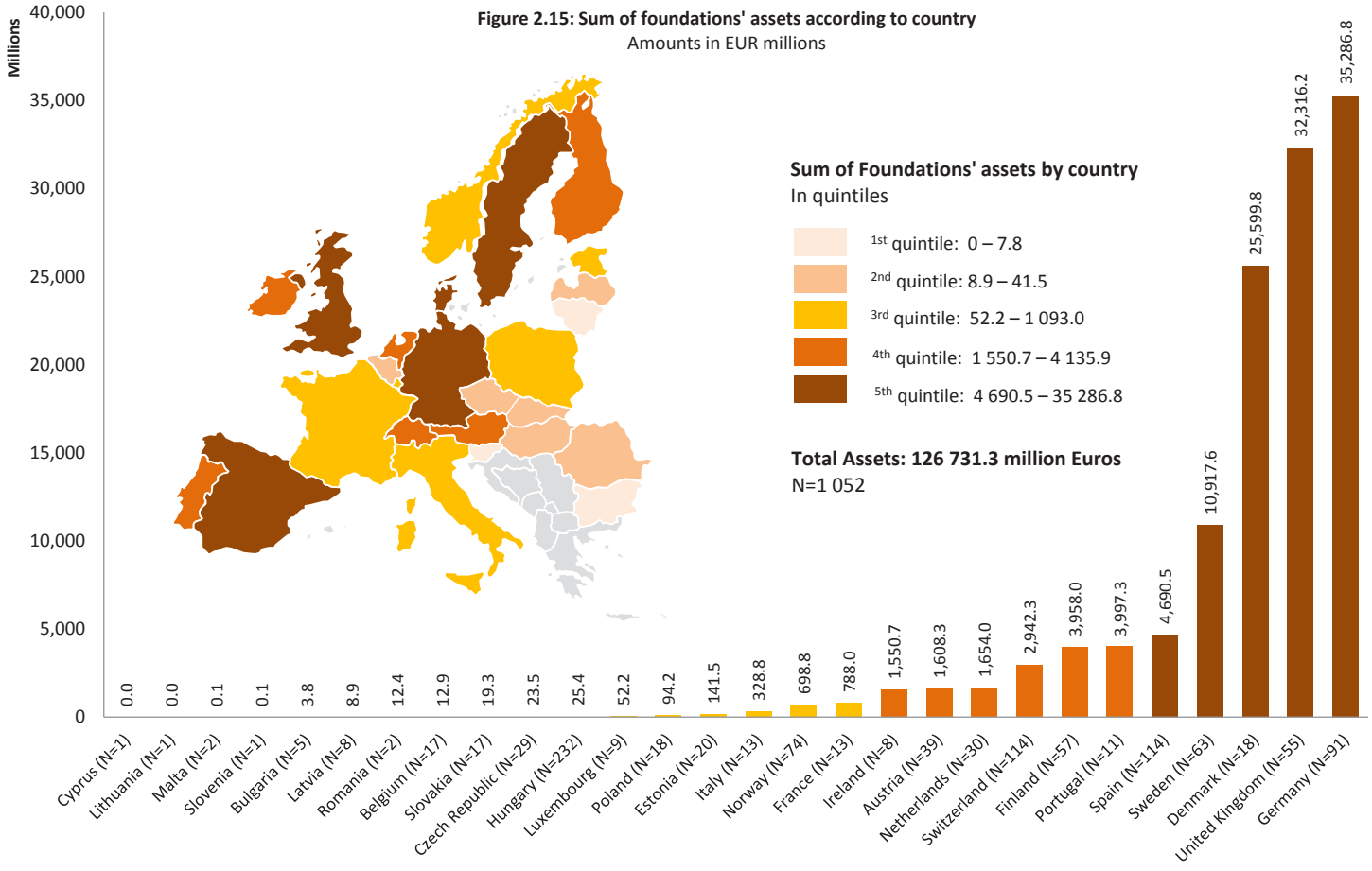
Distribution of Assets	Assets in Euros
Current assets (N=640)	3 773 812 635
Long-term investments in securities (N=678)	41 762 681 090
Long-term investments in fixed assets (N=705)	2 484 530 594
Long-term investments in special funds (N=728)	47 245 197
Other (N=726)	2 262 666 337
Unknown	76 400 369 681
Total assets	126 731 305 534

Looking at the distribution of assets we can note that nearly all foundations (89 %) specified (see Figure 2.13) at least some of their assets as current assets (meaning cash and other assets that can be converted into cash or consumed in the short term, without affecting the normal operations of the organisation). The most popular type of long-term investment is in securities (e.g. bonds, common stocks and/or long-term notes). 58 % of the foundations reported this type of investment. A little more than a quarter (28 %) of foundations have investments in fixed assets (e.g. land and/or buildings) and only 5 % reported long-term investments in special funds. Other types of assets that are mentioned by foundations are machines and equipment, hedge funds and works of art.

When we consider how the assets are distributed (see Figure 2.14) more than 80 % of the reported allocated assets consist of long-term investments in securities. Only 8 % of allocated assets were specified as current assets. Not surprisingly, the smaller foundations with assets of between EUR 0 and 100 000 reported that on average about 75 % of their assets were current assets. As expected, this percentage decreases as the assets of the foundations increase. The richest 12 foundations in terms of assets only hold 5 % on average in current assets. The bulk of their assets can be specified as long-term investments in securities which account for roughly half the total amount reported in this category, once more demonstrating the previously mentioned skewness in the data.

Due to omitted answers a fair amount of the EUR 127 billion in total assets could not be allocated. Therefore, this distribution is less reliable and we can only draw conclusions about the amount of assets that was specified in the data.

Figure 2.15 shows the total amounts of foundations' assets according to country. Again, the differences between the aggregate amounts are considerable. The top quintile consists of Germany, the United Kingdom, Denmark, Sweden and Spain, and although the first three countries are within range of each other, the skewness is astonishing. The aggregate asset amounts of the German foundations are about 10 times those of the Spanish foundations' assets. However, it must be considered that the total amount for each country does not provide an insight into their foundation sectors. Ireland, for example, is in the 4th quintile with EUR 1 551 million in total assets. However, nearly 97 % of the assets (EUR 1 500 million) are accounted for by a single foundation: Atlantic Philanthropies. The bad news for the Irish foundation sector is that Atlantic Philanthropies is a spend-down foundation and will cease their active grantmaking activities in 2016. This example shows how the dominance of wealthy foundations within countries can influence the bigger picture.



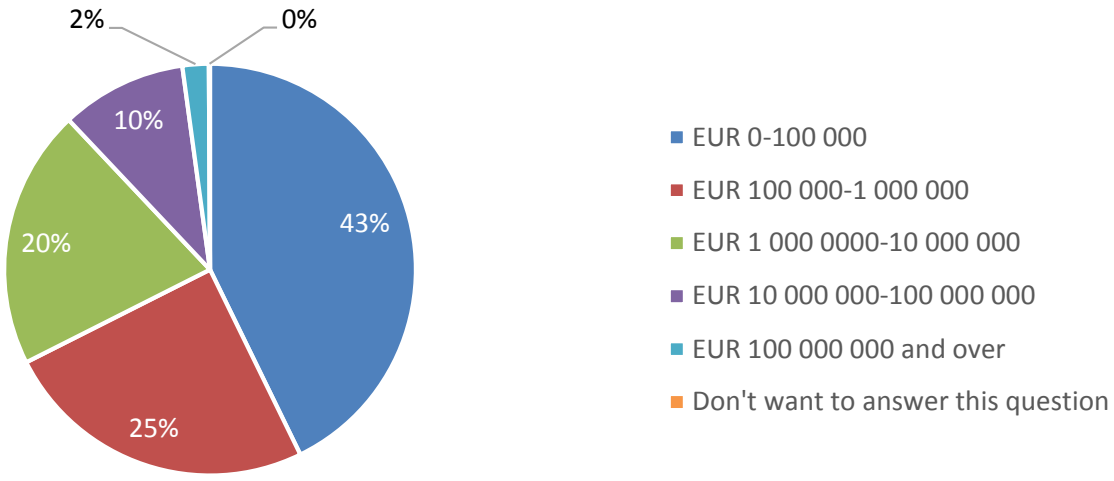
2.3 Expenditure

2.3.1 Total expenditure

In total, 1 117 foundations reported on their total expenditure. This total expenditure included expenses on research and innovation, but it can also include other purposes since many foundations do not have an exclusive focus on research and/or innovation.

The total expenditure of these foundations is just over EUR 10 billion. The mean amount foundations spend is nearly EUR 9 million, whereas the median amount is EUR 200 000. The large difference between the mean and median value demonstrates the skewness in foundations' expenditures. A few very large foundations are responsible for the lion's share of expenditure. Figure 2.16 shows the distribution of the expenditure between different categories. 43 % of the foundations are smaller foundations ranging from EUR 0-100 000 in terms of expenditure. Only 2 % of foundations (22 foundations) have a total expenditure of over EUR 100 million. However, these 22 foundations are responsible for 56.7 % of all expenditure. The highest amount reported in the dataset is slightly over EUR 1 billion, which is contributed by a single British foundation (the Wellcome Trust).

Figure 2.16: Total expenditure according to category in Euros, 2012
As a percentage of total number of foundations (N=1113)



Statistics expenditure	
Number of foundations	1 117
Mean in Euros	8 964 486
Median in Euros	200 000
Total expenditure in Euros	10 013 330 486

Box 2 Skewness

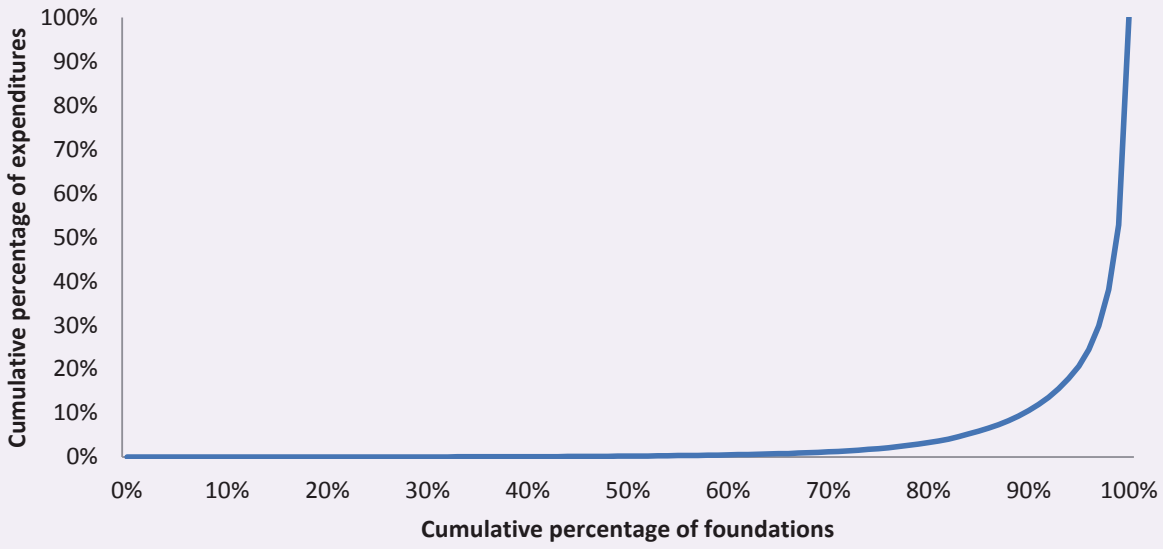
In the statistics of the EUFORI study a recurring pattern can be found: a small number of foundations are responsible for a large share of income, assets and expenditure. When it comes to the expenditure on R&I, for example, there are 991 foundations in the dataset that provided a specification of their expenditure on R&I. The skewness of the R&I expenditure distribution of the EUFORI data is shown in the figure below.

If the R&I expenditure were perfectly proportioned, the cumulative percentage of the foundations would match the same percentage of cumulative expenditure and the line would be perfectly diagonal. In the EUFORI data we find a heavy asymmetry, which appears to be typical for the foundation landscape, but should be taken into account in an analysis of the statistics.

Of the 991 foundations there are 11 foundations (1 % of foundations) with R&I expenditures of over EUR 100 million. These 11 foundations together are responsible for EUR 2.5 billion in R&I expenditure, meaning that they cover about 50 % of the total R&I expenditure. The top 1 % thus accounts for 50 % of the expenditure. The top 10 % of foundations accounts for 90 % of total R&I expenditure.

This pattern of asymmetry is found throughout the data and is therefore also noted in the national reports when discussing the main statistics of the countries' foundations.

Box 2 figure: Skewness in R&I expenditure



2.3.2 Foundations' expenditure on research and/or innovation

For the distribution of total expenditure the majority, around 61 %, is directed towards research and only 7 % towards innovation. One third of the total expenditure of the EUFORI foundations is destined for other purposes. It should be noted that some foundations reported their total expenditure, but failed to make a subdivision in terms of research, innovation and other purposes. In all, more than 25 % of the total expenditure was not assigned to any of the categories. The expenditure going to research, innovation and other purposes can therefore be interpreted/understood as a lower bound estimate.

Figure 2.17: Distribution of total expenditure according to research, innovation and other purposes
As a percentage of total known expenditures (N=991)

Expenditures	# of foundations reporting contributions	Total Amount	Mean amount	Median amount
Expenditure on research	909	4 501 766 122	4 952 438	83 880
Expenditure on innovation	281	512 376 217	1 823 403	112 397
Expenditure on other purposes	513	2 347 487 602	4 575 999	81 840
Unknown	-	2 648 345 421	-	-
Total expenditure	-	10 009 975 363	-	-

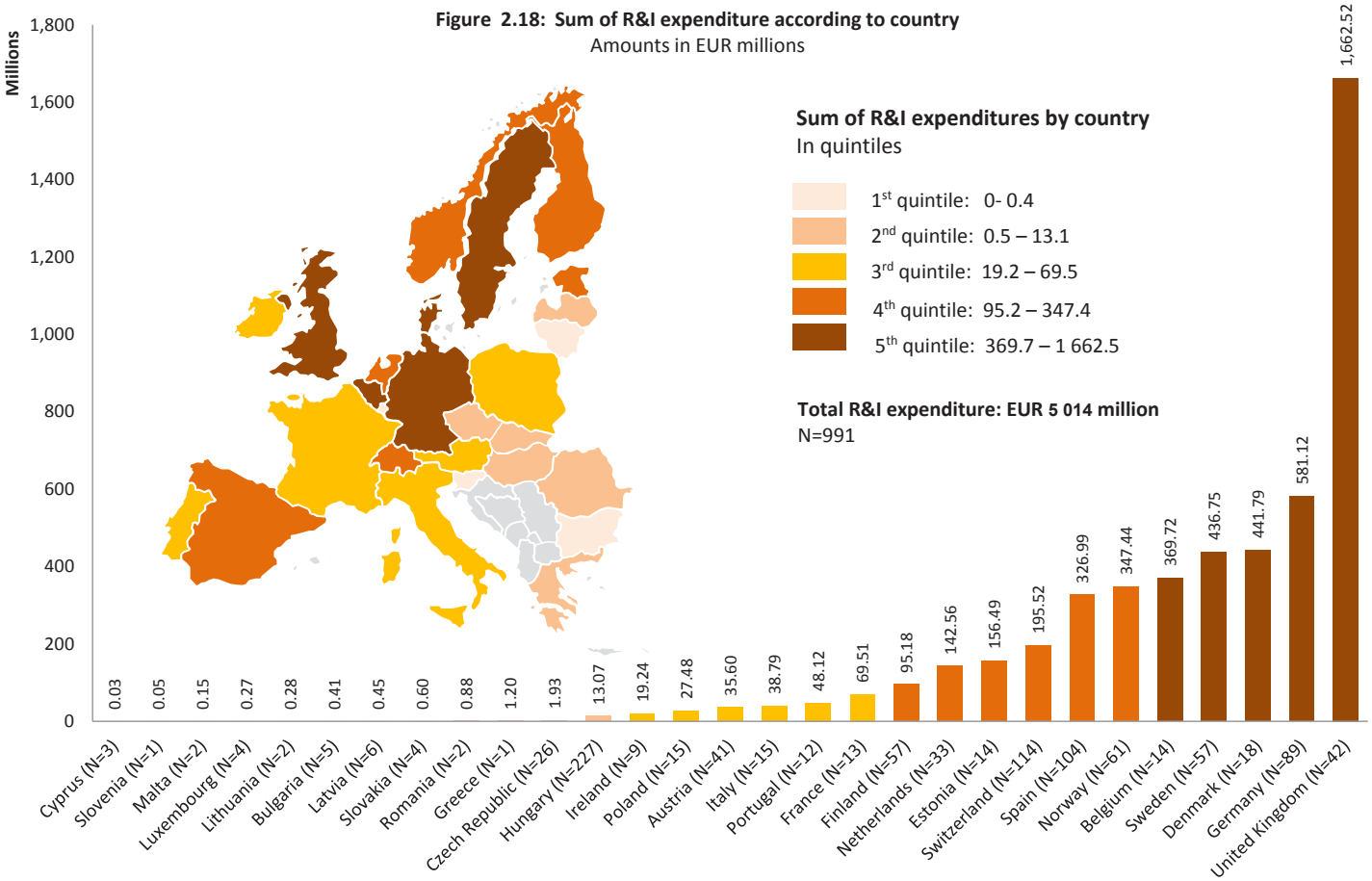
Expenditure on research

909 foundations provided data on their research expenditure. Collectively, they contribute EUR 4.5 billion to research. The mean amount the foundations in the EUFORI data contribute to research is EUR 4.95 million, whereas the median amount is substantially lower at EUR 83 880. The highest amount contributed to research by a single foundation is EUR 623 million. The skewness of the data mentioned above is also apparent here. The mean values are heavily influenced by extreme values, which also becomes apparent when we look at the country comparison. Figure 2.18 shows a country comparison of the expenditure on research and innovation.

When the aggregate amounts foundations contribute to research and innovation in each country are compared, the top countries contributing to research are the United Kingdom, Germany, Denmark and Sweden. The figure below shows that there are huge differences between countries. This is especially apparent in the 5th quintile, which ranges between EUR 370 million and 1.67 billion. It should therefore be noted that these country comparisons are also heavily influenced by the top very large foundations. The UK, for example, is the top contributor, but this is mainly due to the largest research foundation in the dataset: the Wellcome Trust. This foundation by itself is responsible for 44 % of all research expenditure in the UK, and would rank 2nd place in Europe if was considered a country in itself. The average amount foundations spend on research in the UK would drop from EUR 116 million to 19 million if the Wellcome Trust were excluded from the analysis. The same situation is true in other countries. In Portugal, the Gulbenkian Foundation is the main contributor to research, responsible for 50 % of the country's foundation expenditure on research.

The foundation landscape therefore has many smaller foundations which are somewhat overshadowed by the statistics of the foundations in the highest category. Nonetheless, it is clear that these giant foundations are very important in terms of supporting and stimulating research in Europe.

Figure 2.18: Sum of R&I expenditure according to country
Amounts in EUR millions



Expenditure on innovation

In the EUFORI survey foundations were asked to specify the percentage of their total expenditure destined for the support of innovation. Compared to their research expenditure, foundation's contributions to innovation are quite modest. The 281 foundations reporting their innovation spending contribute approximately EUR 500 million, meaning that of the total of EUR 5 billion for R&I a little more than 10 % goes to innovation.

Foundations supporting innovation without contributing to research are quite rare (N=101). These foundations are typically 'smaller' in terms of resources. Their income is substantially lower compared to foundations supporting both research and innovation, or compared to foundations supporting research only. The main countries with foundations contributing to innovation are the United Kingdom, Spain and Switzerland.

Box 3: Innovation

Innovation as a concept is much more difficult to grasp than research. It is, however, a concept that often resonates in the description of foundations' roles. From earlier research (Anheier and Daly 2006: 205) we learned that even foundations that identified themselves with innovation questioned the meaning of the concept and wondered what it meant to be innovative. In reality research and innovation are often intertwined, which also makes it difficult to analyse these two areas separately.

The definition of Innovation used in EUFORI Study is based on the definition of the Innovation Union: 'The introduction to the market of a new product, methodology, service and/or technology or a combination of these aspects'.

Even though not all foundations in the EUFORI study support innovation, this does not mean that they are not innovative in their operations and grantmaking activities. In the national reports examples of foundations' innovative practices are mentioned. These innovative practices can include examples of successful partnerships, innovative initiatives, projects engaging the public's interest in research, pilot and demonstration projects, and the introduction to the market of new products, methodologies, services and/or technologies.

2.3.3 Basic versus applied research

Taking a closer look into how the money is spent in the category of research it appears that 83 % of the EUFORI foundations have a focus on applied research (aimed at acquiring new knowledge with a particular application or use intended) while 61 % support basic research (aimed at acquiring new knowledge with no particular application or use intended). It is difficult to draw conclusions in terms of expenditure destined for both areas of research as more than 50 % of the total expenditure on research could not be assigned to these areas. However, figures tend to show an equal distribution of expenditure on basic and applied research.

Distribution of expenditure on research	Amount in Euros	%
Basic research (N=610)	1 077 808 364	24 %
Applied research (N=616)	1 003 178 304	22 %
Unknown	2 420 779 454	54 %
Total expenditure on research	4 501 766 122	100 %

2.3.4 Direct research versus research-related activities

By dividing the category of research into direct research versus research-related activities (e.g. the support for researcher mobility, knowledge transfer, the dissemination of research and science communication) results show that a greater share of the total expenditure on research is destined for the research activities themselves. Research-related activities are supported with much smaller amounts of money.

Distribution of expenditure on research	Amount in Euros	%
Direct Research (N=629)	2 087 215 339	46 %
Research Related (N=636)	636 196 975	14 %
Unknown	1 778 353 809	40 %
Total expenditure on research	4 501 766 122	100 %

2.3.5 Changes in R&I expenditure

Compared to the previous year, many foundations report positive findings. More than a quarter (26 %) of the 943 foundations reported that their expenditure on research and/or innovation had increased. A slight majority (53 %) expected their expenditure to remain unaltered compared to the previous booking year (2011). 17 % of foundations reported less positive findings: 150 foundations (16 %) indicated that their expenditure had decreased, and in 12 cases the expenditure had been discontinued. The expectations for the follwing year were also slightly optimistic. A quarter of the 915 foundations expected an increase in their R&I expenditure. A large majority (61 %) expected that their expenses would remain the same. Only 12 % expected a decrease in their expenditure, and 20 foundations (2 %) expected their expenditure to R&I to cease.

Figure 2.19: Changes in expenditure on research and innovation compared to the previous year
As a percentage of the total number of foundations (N=943)

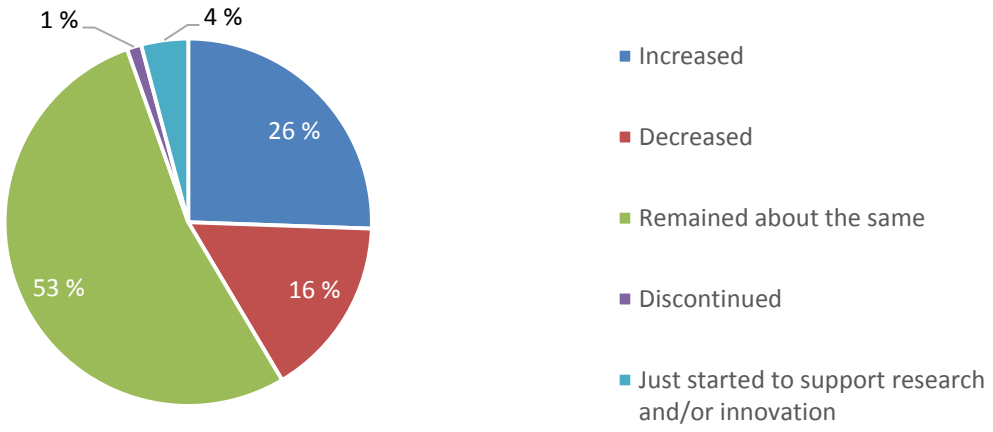
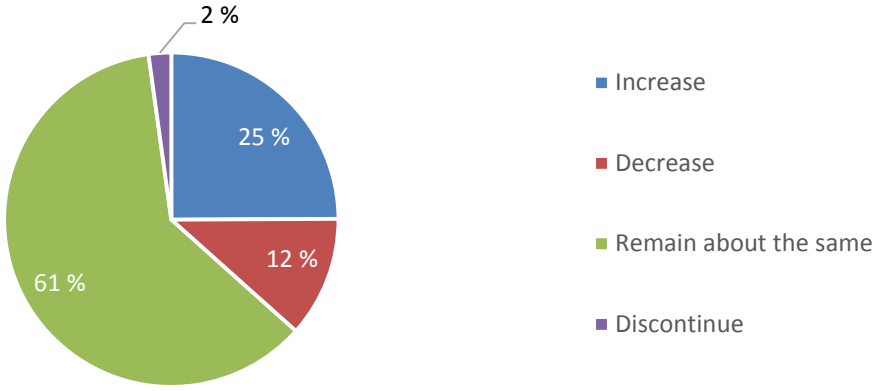


Figure 2.20: Changes in expenditure on research and innovation, expectations for the following year
As a percentage of the total number of foundations (N=915)

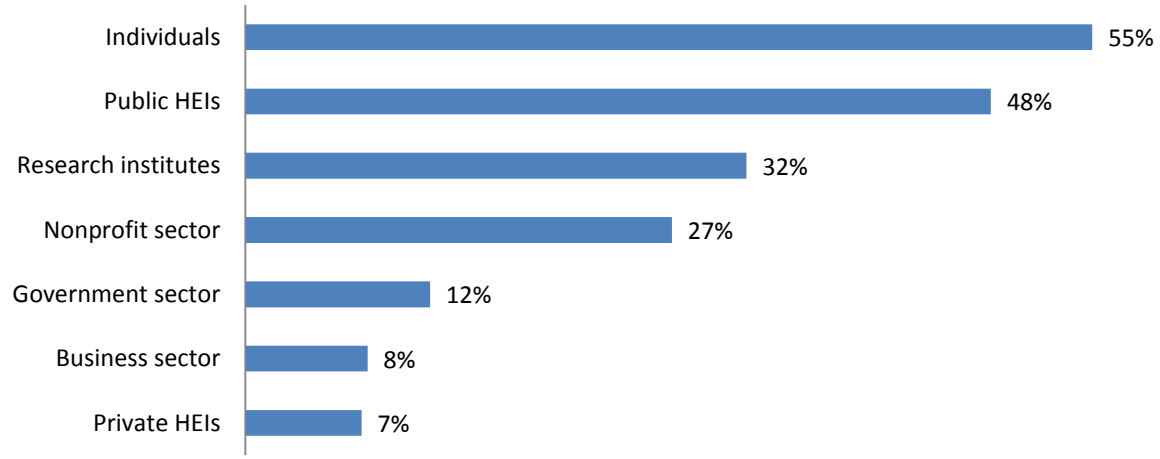


2.4 Focus of support

2.4.1 Beneficiaries

The main beneficiaries of foundations are private individuals. 55 % of the surveyed foundations claimed to contribute support for individuals. Other important beneficiaries are public Higher Education Institutions (HEIs) that can count on support from almost half of the foundations (48 %). Research institutes complete the top three with almost a third (32 %) of foundations benefiting them.

Figure 2.21: Beneficiaries
As a percentage of total number of foundations, multiple answers possible
(N=521)



2.4.2 Research areas

When it comes to supporting different research areas, it becomes evident that 'medical science' is the most popular research area among the foundations. This is true both in the number of foundations (44 %) and in the amount of expenditure (63 %) foundations make to benefit this area. The discrepancy between the share of foundations and the share of expenditure in the field of medical science is mainly caused by the larger foundations. Of the foundations with expenditure over EUR 100 million, 81 % claimed to support medical science, which is nearly twice the average percentage. Although multiple answers were possible, and larger foundations are more likely to have the resources to support multiple areas, it seems that this notably high percentage is caused by the relatively high number of health foundations in the EUFORI dataset. Important contributors to medical science, for example, are renowned foundations such as Institut Pasteur (France), Fundación General CSIC (Spain) and the British Heart Foundation (United Kingdom).

Figure 2.22: Support for research areas
As a percentage of total number of foundations, multiple answers possible
(N=1257)

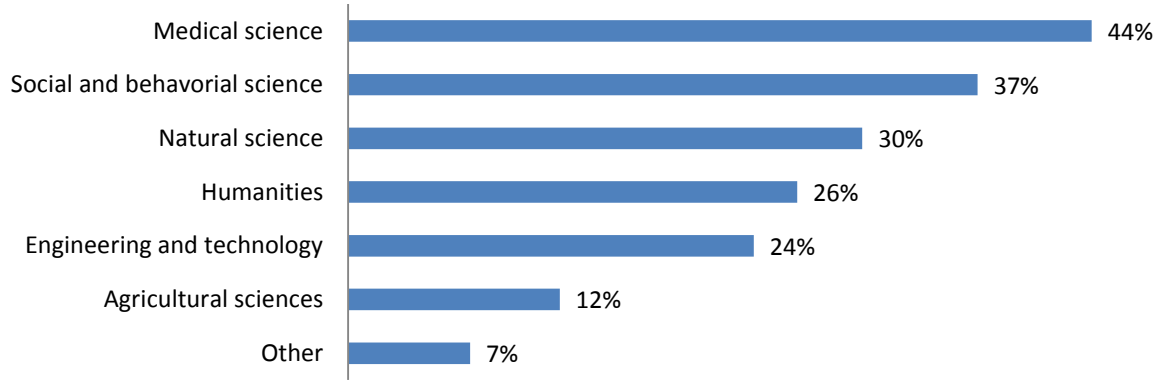
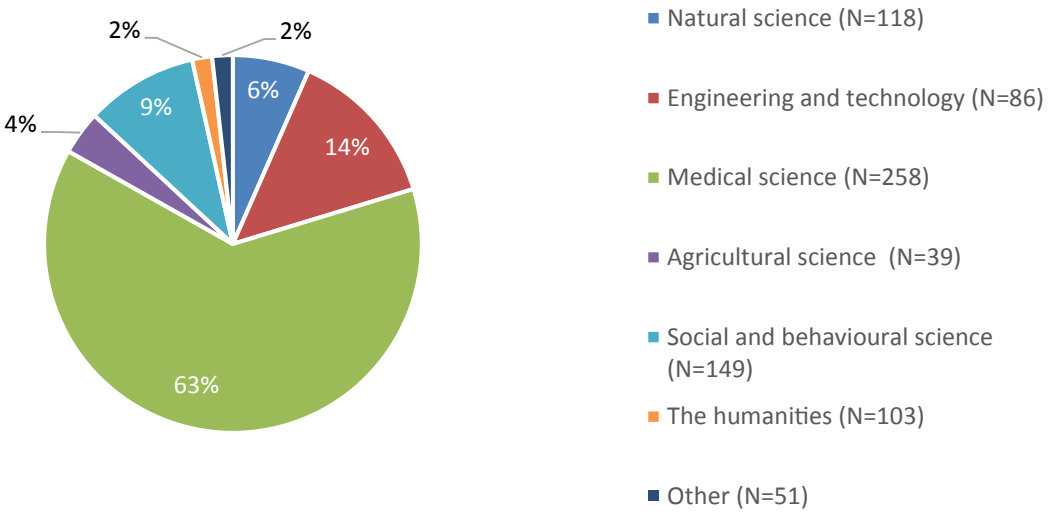


Figure 2.23: Support for research areas
As a percentage of the total known expenditure on research areas



Research area	Expenditure in Euros
Natural science (N=118)	148 331 726
Engineering and technology (N=86)	309 343 675
Medical science (N=258)	1 417 570 899
Agricultural science (N=39)	84 224 026
Social and behavioural science (N=149)	217 171 337
The humanities (N=103)	38 333 832
Other (N=51)	39 823 010
Unknown	2 246 967 617
Total expenditure on research	4 501 766 122

Other popular research areas in terms of the number of foundations are social and behavioural science and natural science. In terms of expenditure the engineering and technology category is also in the top three.

In most countries, medical science is the preferred field of support for foundations, but there are some interesting exceptions. In quite a few Eastern European countries, social and behavioural science is the most popular research area. From the national reports we learn that the explanation for this phenomenon lies in the legacy of the Communist regimes. Under Communist occupation, social and behavioural science was abolished and then made illegal. After the fall of Communism a rehabilitation of social science is still taking place in which the foundations are playing their part. Countries where social and behavioural science the preferred research area for foundations (in terms of the number of foundations) are among others: Bulgaria, the Czech Republic, Estonia, Latvia and Romania.

2.4.3 Research-related activities

As mentioned earlier, the lion's share of foundations' expenditure goes to the direct support of research. Only a small percentage (14 %) of the total research expenditure is destined for research-related activities. However, it is probable that foundations find it difficult to make a distinction between direct research and research-related activities. Sometimes a grant is provided to a project that entails predominantly direct research, but also which includes some research-related activities. In these instances it is quite possible that the research-related activities could not be accurately assigned as such.

When asked about the research-related activities that foundations support, 78 % of the foundations reported that they supported the dissemination of research. Examples of this dissemination are the organisation and/or funding of seminars, conferences or (digital) publications. This activity is by far the most popular activity, followed at a distance by support for research mobility and career development (43 %). It must be noted that stipends for students below PhD level are excluded from the EUFORI study, as this is support for education. The support for PhD programs and scholarships for young researchers on the other hand is included in the category of 'research mobility and career development'. Almost half (43 %) of the foundations indicated that they support this activity. The top three activities include the support of science communication/education (i.e. museums, science parks, television programmes).

Although 'Infrastructure and equipment' is not the most popular activity among foundations (as shown in Figure 2.24), it is the category with the highest support in terms of the expenditure of foundations. Perhaps this is not surprising since supporting research centres and laboratories is sometimes related to the purchase of costly equipment. The dissemination of research on the other hand is less capital intensive, but still accounts for 22 % of the known expenditure on research-related activities. Here it must be noted that the majority of the dissemination expenditure comes from one Swiss foundation and therefore somewhat distorts the overall distribution.

Figure 2.24: Research-related activities
As a percentage of total number of foundations, multiple answers possible
(N=492)

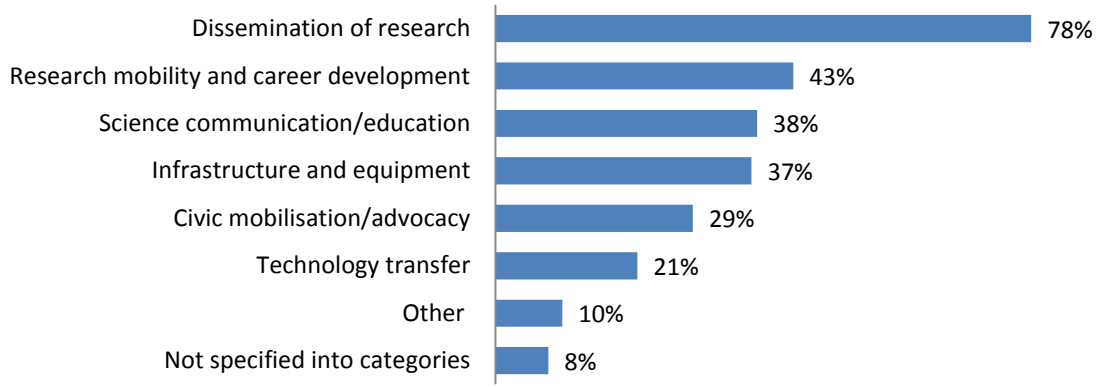
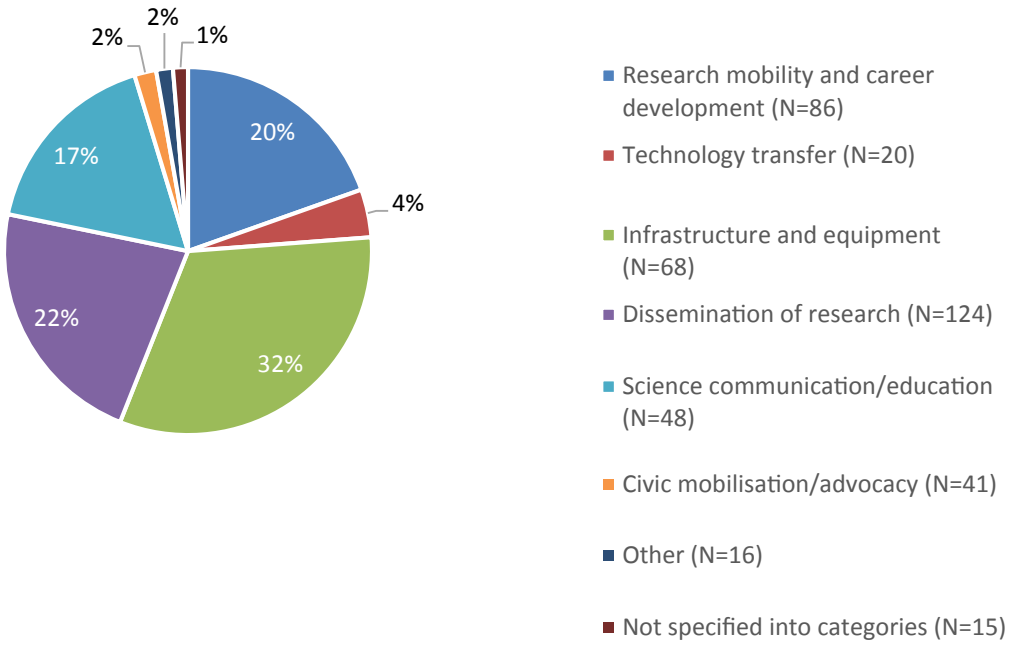


Figure 2.25: Research- related activities
As a percentage of total known expenditure to research -related activities



Expenditure	Amount in Euros
Research mobility and career development (N=86)	53 657 831
Technology transfer (N=20)	11 574 508
Infrastructure and equipment (N=68)	88 323 228
Dissemination of research (N=124)	60 843 137
Science communication/education (N=48)	46 795 358
Civic mobilisation/advocacy (N=41)	5 253 912
Other (N=16)	4 040 891
Not specified into categories (N=15)	3 596 475
Unknown	362 009 035
Total expenditure on research-related activities	636 094 375

2.5 Geographical dimensions of activities

2.5.1 Geographical focus

More than 850 foundations provided information on the geographical distribution of their research and innovation expenditure. 550 of 854 (64 %) foundations claimed to operate on a national level. Of these 550, there are 242 that focus exclusively on a national level. About half (51 %) of the foundations reported expenditure on a local level and about a quarter (26 %) of the foundations indicated that a share of their expenditure was distributed on a European or international level. The contributions on a European and international level are quite modest with the average percentage of R&I expenditure being 8 % on a European level and 8.6 % on an international level. The average percentages for the local and national levels

are much higher with 38.5 % and 45.5 %, respectively. This preference for the national and local levels becomes evident when we look at the distribution of the expenditure (see Figure 2.26). We should note that foundations supporting R&

I in the EUFORI study allocated 90 % of their expenditure to these purposes at a national or regional level. The high percentage for the national level is mainly caused by the statutes of foundations which often impose restrictions on their geographical focus. Moreover, from the FOREMAP study it was already clear that foundations also encounter legal, fiscal or cultural barriers when extending their activities abroad (FOREMAP 2009: 145). The small percentage of cross-border giving by foundations in Europe does not actually mean that foundations' support is not internationally oriented. Foundations may fund the national dimension of an international research progam, for example, or they may fund scholarships and chairs in their own country for outstanding researchers from abroad (see FOREMAP for more information).

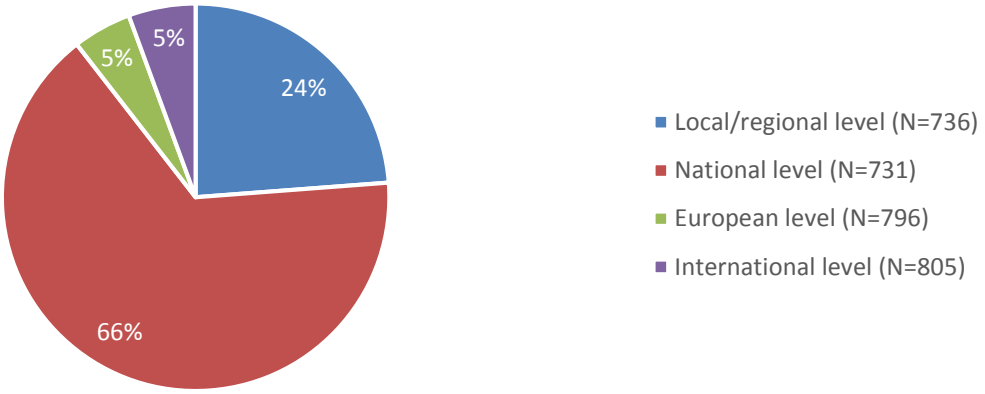
There are only a few big foundations in Europe that operate across national borders. The VolkswagenStiftung in Germany, for example, has a strong tradition in supporting the internationalisation of research in many parts of the world. The EUFORI study results show that only a small percentage of the EUFORI foundations that operate across their national borders experience difficulties. However, based upon these data we cannot conclude that barriers do not exist. It might be unsurprising that foundations already operating abroad hardly experience any difficulties. For foundations operating on a national level barriers could prevent them from cross-border giving.

In February 2012 the European Commission presented a proposal for a European Foundation Statute in order to facilitate the cross-border activities of public benefit purpose foundations and make it easier for them to support public benefit causes across the EU. The European Foundation Centre (EFC) and the Donors and Foundations Networks in Europe (DAFNE) play an important role in increasing awareness and support for the creation of a European Statute for foundations at a European and national level. In order to illustrate and justify the need for a Statute the EFC collected many concrete examples, where foundations share their experiences and views on cross-border giving (EFC, 2012). The Portuguese national report illustrates that obstacles related to bureaucracy and administrative burden were experienced when foundations implemented joint projects on an international level. Also, from the donor perspective tax benefits with respect to donations made to foundations abroad are limited.

On the 16th of December 2014 the new Juncker Commission decided that the European Foundation Statute will not be part of its so-called 'better' regulation agenda for 2015. The European Foundation Statute is one of the 80 proposals that the European Commission has decided to withdraw from the legislative agenda. [1]

1 http://www.efc.be/news_events/Pages/European-Commission-halts-negotiations-on-the-European-Foundation-Statute-%E2%80%93-What%E2%80%99s-next.aspx

Figure 2.26: Geographical focus of support
As a percentage of the total (known) expenditure on research and/or innovation



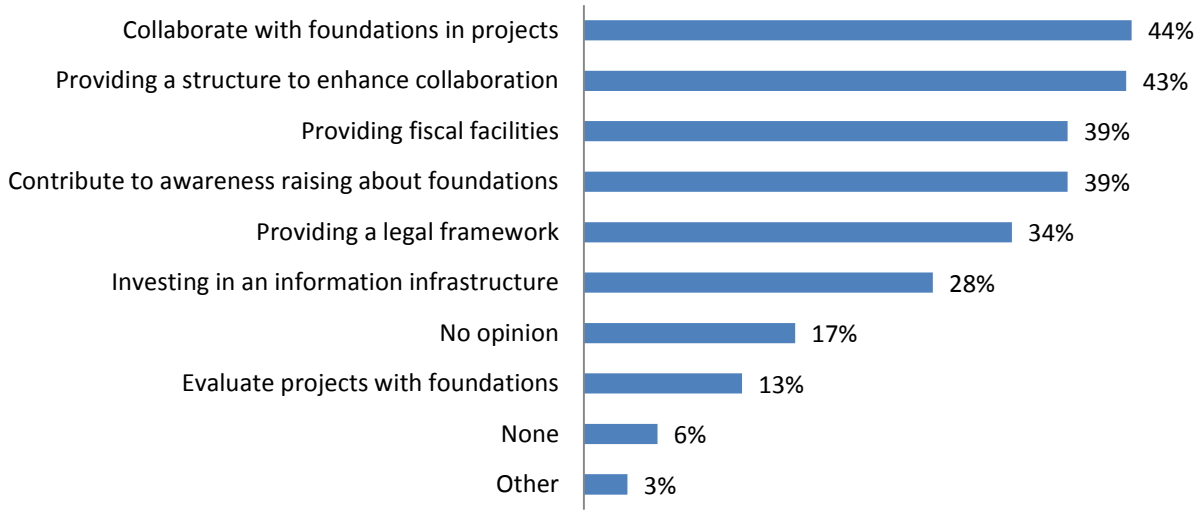
Geographical level	Amount in Euros
Local/regional level (N=736)	566 078 895
National level (N=731)	1 562 814 683
European level (N=796)	116 685 196
International level (N=805)	133 453 552
Not allocated	2 635 110 013
Total expenditure on R&I	5 014 142 339

2.5.2 The role of the European Union

Although a minority of the foundations in the EUFORI study (25 %) indicated that some of their expenditure was allocated on a European level, more than 900 foundations gave their opinion on the role of the European Union. In the EUFORI survey, the following question was asked: 'In your opinion, what should the role of the European Union be in relation to foundations?' The results are shown in Figure 2.27.

Although there seems to be no single dominant role, the roles relating to 'collaboration' are the most popular among foundations with around 44 % and 43 % of foundations opting for collaborative roles with the EU. Nearly as popular is the provision of fiscal facilities with 39 %. Together with the provision of a legal framework these roles can be perceived as the facilitation of the provision of a fiscal and legal framework.

Figure 2.27: Role of the European Union
As a percentage of total number of foundations, multiple answers possible
(N=920)

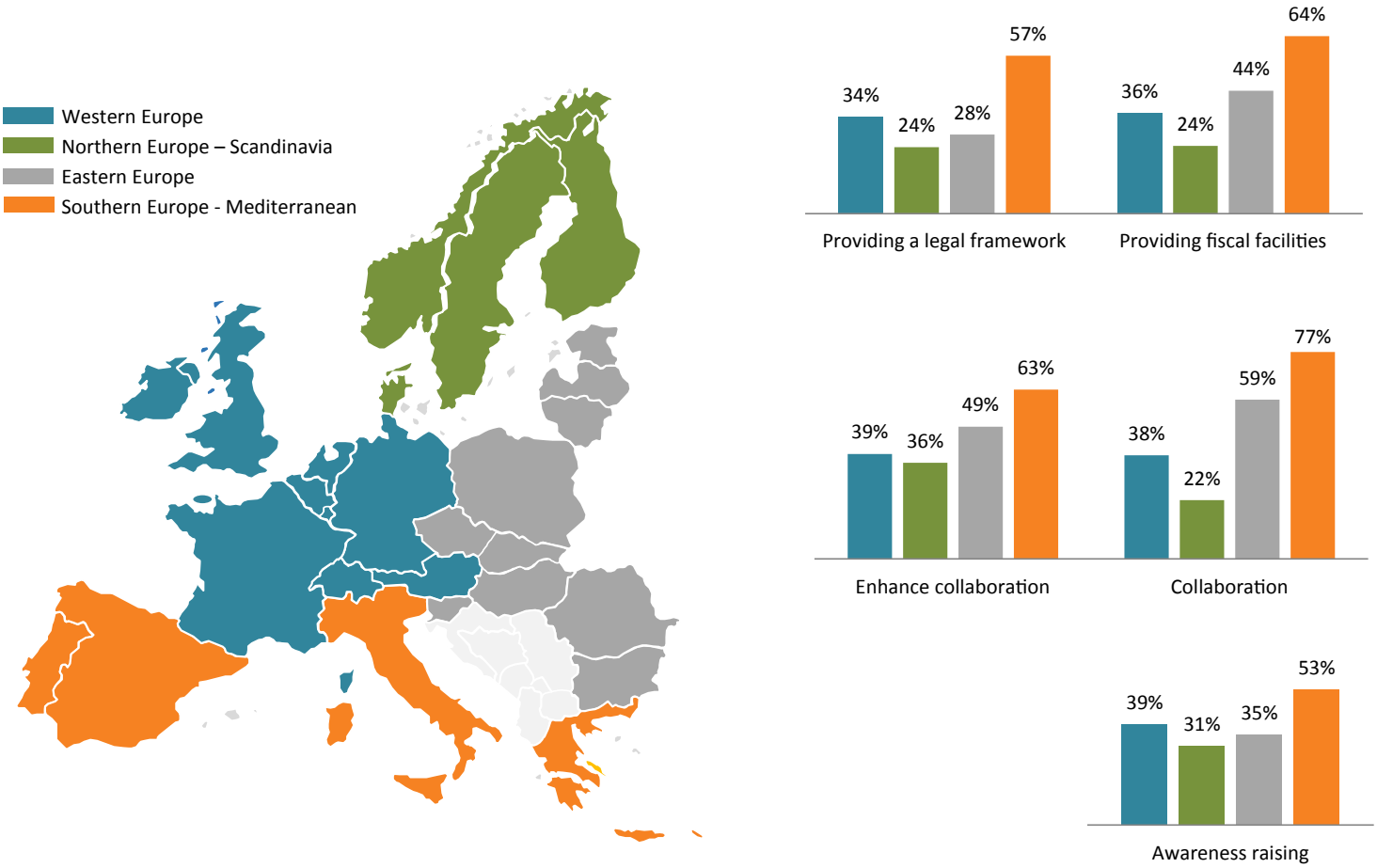


Looking at the different regions in Europe (see Figure 2.28) it is interesting to note that the Southern and Eastern European countries see an important role for the European Union compared to the other two regions. Overall, the Mediterranean foundations are quite keen on seeing a more active role for the EU. This is especially true when it comes to collaborating with the EU; the Mediterranean foundations score well above average with more than three quarters of foundations stating that this should be one of the roles of the EU. The Eastern European foundations also score high on the collaboration cluster and on the provision of fiscal facilities. The Western European foundations have more or less average scores ranging between 34 % and 39 % of foundations that envision a particular role for the EU.

Another interesting observation concerns the consistently below average percentages for the Scandinavian foundations which are, on average, less eager to see the EU as a collaboration partner (21.8 %), or as a provider of legal (23.8 %) and fiscal (24.3 %) facilities.

Whether these statements on the role of the EU have been interpreted correctly is difficult to say. Collaboration, for example, is a broad term which could perhaps be interpreted as 'financial support'. Worth noting from the survey results, for example, is that in the 'other' category, where foundations were welcome to enter their own text, the financial support for foundations in the form of subsidies or grants was mentioned remarkably often.

Figure 2.28: Regional comparison, role of the EU



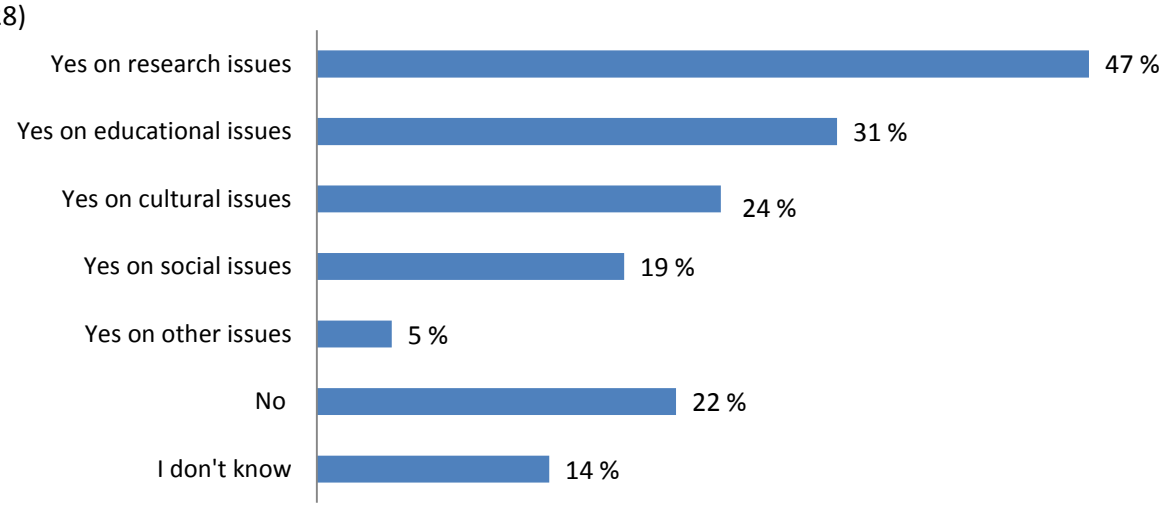
2.5.3 Contribution to European Integration

Besides asking about the foundations' expectations with regard to the EU, the EUFORI survey also considered the contributions that foundations make to enhance European integration. The following question was asked: 'Do your activities contribute to European integration'? The results are shown in Figure 2.29. The main issues foundations contribute to are, not surprisingly, research issues (47 %) followed at a distance by educational issues (31 %) and cultural issues (24 %). One issue mentioned separately by some foundations was their engagement in international research networks as their contribution to European integration.

One issue that was raised by several foundations is their contribution to environmental issues. Specific examples of these contributions are, among others: addressing political issues concerning global climate problems, providing environmental data services and the conservation of nature.

Interestingly, a large proportion of foundations does not seem to contribute to European integration (22 %) or has no opinion about it (14 %). This may indicate that contributing to integration on a European level is not one of their main priorities. This is especially true for smaller foundations that exclusively operate on a local or national level.

Figure 2.29: Contribution to European integration
As a percentage of the total number of foundations, multiple answers possible
(N=928)

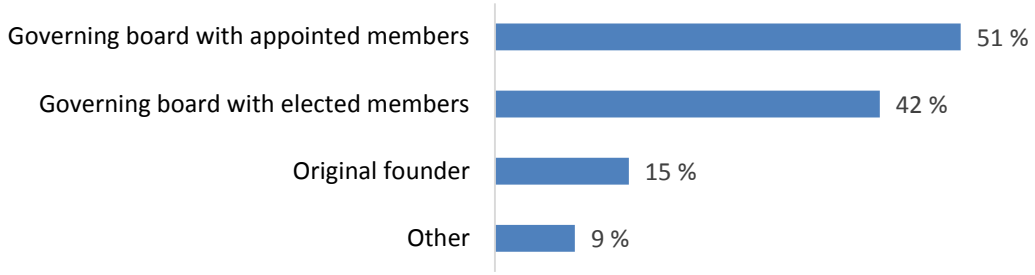


2.6 Foundations' operations and practices

2.6.1 Management of foundations

In section 2.2. the financial founders of foundations were analysed. The majority of foundations indicated that a private individual or family formed the original foundation. When it comes to managing the foundation it seems that in only 15 % of the foundations the original founder is still in charge of defining the strategy. It is much more common that foundations are managed by either a governing board with elected members or by a governing board with appointed members. Since multiple answers were possible, combined management is also mentioned.

Figure 2.30: Management of foundations
As a percentage of the total number of foundations, multiple answers possible
(N=1149)



The foundations in the EUFORI study also specified the number of governing and supervisory board members. 1 065 foundations provided insight into the number of governing board members. The average number of governing board members is six, but the most frequently reported number of members is three. Foundations with supervisory board members are less common. 613 foundations provided information on the number of supervisory members. Here the average number of members is seven, but three is again the most often mentioned number of supervisory board members.

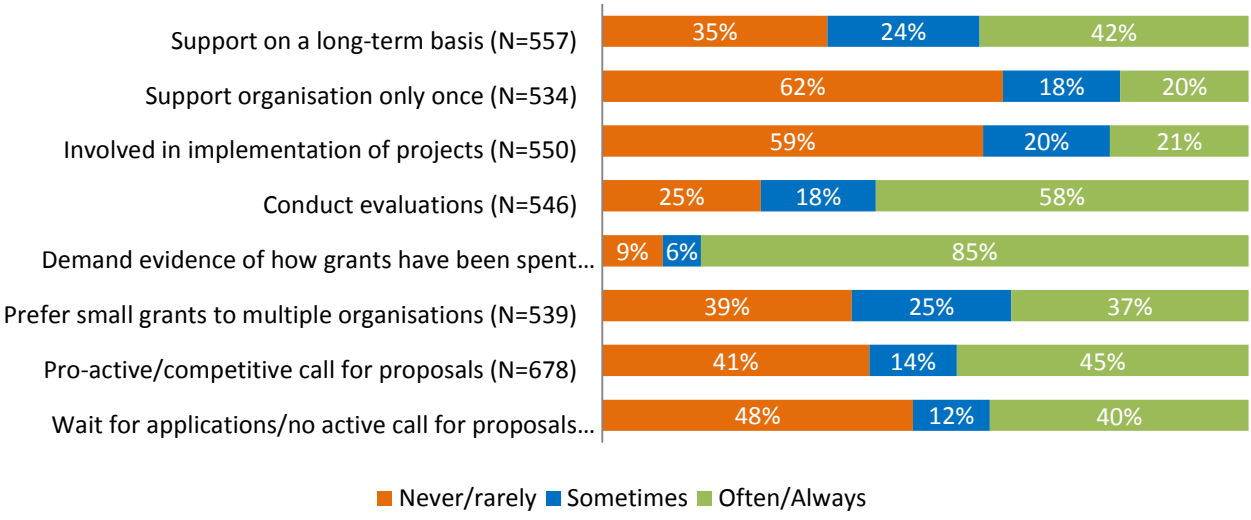
2.6.2 How do grantmaking foundations support research?

In the EUFORI data there are 874 foundations that are active in providing grants. These foundations were presented with statements about their daily practice activities. The results are shown in Figure 2.31. One daily practice stands out from the rest: demanding evidence of how grants have been spent seems a common practice for nearly all grantmaking foundations, with 85 % of foundations often or always demanding evidence. Conducting evaluations is also fairly common with 58 % of the foundations stating that they often or always conduct evaluations.

One positive finding is that foundations on average have a preference for support on a long-term basis over supporting organisations as a one off (i.e. an organisation/project can receive only one grant). It is predominantly the smaller foundations in terms of resources that provide support on an incidental basis. The larger the foundations, the more possibilities there are for structural support.

With regard to calls for proposals, the results can roughly be split in two, with half of the foundations waiting for grant applications and the other half proactively making calls for applications. The results show that foundations take care when evaluating their own efforts and that they are fairly committed to their support.

Figure 2.31: Daily practices of grantmaking foundations
As a percentage of the total number of foundations



2.6.3 Engagement in partnerships

A little more than half (51 %) of the 897 reporting foundations indicated that they develop joint research activities in partnership with others. Universities are the most popular party to collaborate with, with 38 % of the nearly 900 foundations teaming up with universities. This implies that out of the foundations that engage in partnerships more than 75 % do so with universities. Other frequently mentioned collaborations are partnerships with foundations (60 %), research institutes (56 %) and other nonprofit organisations. An interesting partner that was mentioned by several foundations are museums.

For operating foundations it is much more natural/necessary to engage in partnerships than it is for grantmaking foundations. On average, 72 % of the operating foundations are engaged in partnerships, as compared to only 30 % of the grantmaking foundations. Another linkage in terms of partnership engagement is the size of the foundations. The smaller foundations are less likely in terms of total expenditure to engage in partnerships. Of the foundations with expenditure of up to EUR 100 000, on average 36 % collaborate, but this percentage increases when other expenditure categories are taken into consideration. Of the foundations with expenditure of between EUR 10 million and 100 million, on average 74 % are engaged in partnerships, and this percentage is 91 % for foundations with expenditure of over EUR 100 million. This is not a surprising outcome since larger foundations are usually better staffed and more professional, which enables them to find suitable partners to collaborate with.

Figure 2.32: Partnerships
As a percentage of the total number of foundations, multiple answers possible
(N=897)

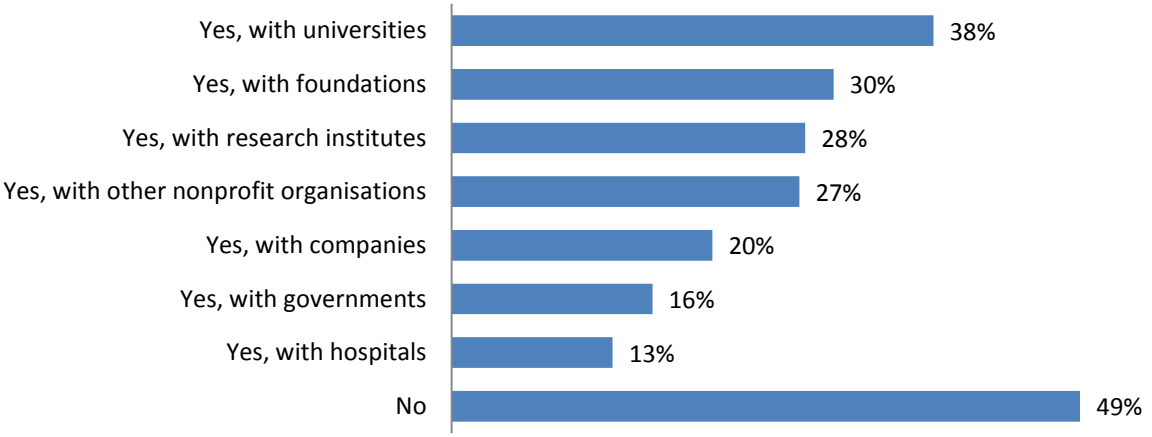
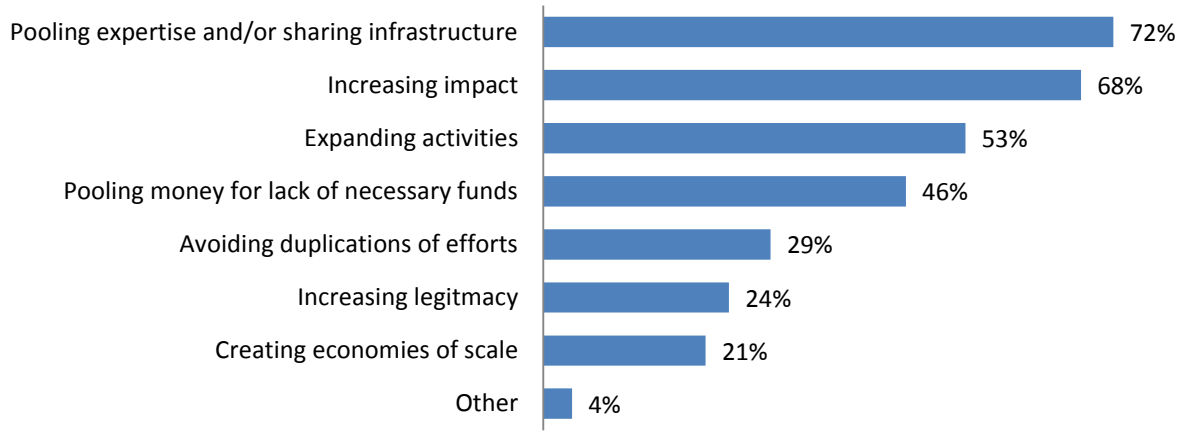


Figure 2.33: Motivation partnerships
As a percentage of total number of foundations, multiple answers possible
(N=438)



The main incentive (72 %) for foundations to engage in partnerships is to pool expertise and to share infrastructure. Other motivations for foundations include increasing their impact (68 %) and the expansion of activities (53 %). These high percentages imply that foundations see multiple motivations/rewards from collaborating with others. An interesting example of how foundations can pool money and expertise is a cross-border collaboration between three foundations from France, the Czech Republic and Slovakia that together organise the Annual French-Czech-Slovak Philosophy Symposium. The foundations work as equal funding partners with one of the foundations acting as a coordinator, depending on in which country the symposium takes place. This is an example of a successful international partnership facilitating a research-related activity.

When we look at engagement in partnerships from a comparative perspective, there is some significant variation between countries. On average, 51 % of foundations engage in partnerships, but between countries this percentage ranges [1] from 25 % to 87 %. Spain is the partnership leader with 87 % of Spanish foundations in the EUFORI data claiming to engage in partnerships. Other countries with a high partnership percentage are Malta (83 %), Estonia (81 %), Romania (80 %) and Italy (78 %). Some of the countries with a relatively low average partnership engagement are: Austria (25 %), Finland (28 %), Sweden (31 %), Norway (36 %) and Switzerland (42 %). The presence of Finland, Sweden and Norway in the bottom five countries may suggest some regional disparity. Overall, we can note that there are some differences between the European regions and that in particular Southern European and Eastern countries report higher partnership engagement than the Western and Northern European countries. However, there are quite some exceptions and the disparity between the numbers of observations does not really allow for generalised statements.

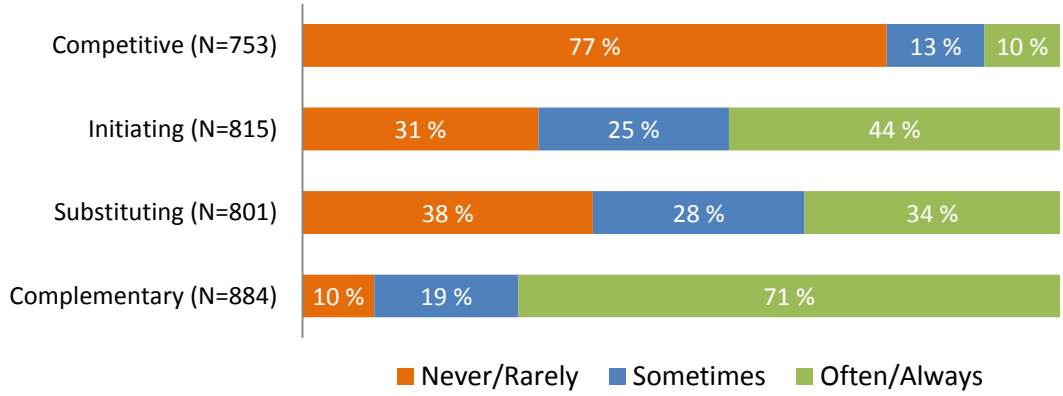
2.7 Roles and motivations

What is the role of foundations within society? In the literature, foundations are often characterised as independent, free and flexible institutions (FOREMAP 2009: 111). Anheier and Leat (2006: 3) describe them as 'innovative, risk-taking funders of causes that others either neglect or are unable to address'. But how do foundations perceive the contributions they make to the research and innovation field compared to other players?

In the EUFORI survey foundations were asked to describe the role of their foundation in the research and innovation domain. Four roles were presented and for each role the foundations had to indicate how appropriate this role was to them. The four roles are: complementary, substituting, initiating and competitive. The results are shown in Figure 2.34. Two observations stand out. Firstly, foundations predominantly view their own role as complementary (i.e. additional to public/other supporters) in the research and innovation domain. Secondly, foundations do not view themselves as competitive agents (i.e. aimed to rival with other initiatives).

1 Only taking into account countries with five observations or more.

Figure 2.34: Roles of foundations
As a percentage of the total number of foundations according to role



The role of being complementary implies for foundations that they 'fill in the gaps' in society and try to serve groups and areas that have been overlooked by the government (Anheier and Daly 2006: 198). It is this role that seems to suit foundations best in their own perception; 71 % of foundations clearly recognise this role. This finding is consistent with the research conducted by Anheier and Daly (2006: 198), who found that the majority of the foundations interviewed for their research associated this role with their foundation. The role of being complementary is also the most natural role for foundations when we consider their resources compared to other players in the R&I landscape: government funding and the contributions by the business sector. The substituting role, on the other hand, is far less popular with 34 % foundations perceiving this role as being applicable. Besides the fact that many foundations would not have the capacity to take over state responsibilities, it also came from several interviews that foundations do not think it is their place to do so.

Foundations have modest resources and, therefore, limited options in the projects or areas they can support. Nonetheless, with relatively modest contributions, they can play a significant and important role in the projects they support. This also becomes apparent in the way foundations perceive their initiating role. Nearly half of foundations (44 %) view taking the initiative as a role that can be applied to them. Foundations do not view the competitive role as one that represents their activities. 77 % of foundations indicate that they never or rarely take up a competitive role.

When evaluating the role foundations play, we should take into account that exclusive financial support is for many foundations not the main modus operandi when supporting projects. Often, foundations are involved in the coordination of projects, or they may take the initiative to pool money for a certain program or project which otherwise would not have happened. In that way, their financial contribution may be limited, but their societal impact is fairly significant.

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3 Country differences in research and innovation foundation activity

Countries in Europe show markedly different levels of foundation activity supporting research and innovation. How can these differences between countries be explained? In the current chapter we explore answers to this question. We first describe the differences we observe between countries in Europe in terms of foundation activity. Then we present the results from statistical analyses that can help us begin to understand these differences. We conclude this chapter with a set of recommendations for future research on foundation activity.

3.1 Large differences between countries in Research and Innovation activity by foundations in Europe

In the preceding chapter we described the landscape of foundations supporting research and innovation in Europe. In the current chapter we explore why countries in Europe differ so markedly in their levels of activity. We do so by describing the differences in foundation activity between countries in Europe in relation to other differences between those countries. Based on this analysis it is not possible to draw any firm conclusions about the causes of foundation activity in Europe, but we will be able to demonstrate what characteristics are distinctive of countries that have a vibrant foundation sector supporting research and innovation. We begin our analysis with a description of the differences between countries in Europe according to a set of key indicators of foundation activity (see Table 3.1). The first column shows the numbers of foundations in the EUFORI database for which we have valid responses to questions about the indicators as shown in Table 3.1. For each country there are two numbers: the lowest and the highest number of observations. In most countries we have a higher number of valid observations of income and expenditure than of grantmaking status and endowment income. This is because financial information was added to the database for some foundations that did not complete the survey. As a result, the financial information for these foundations is included in the database, while there is no information available on grantmaking programs and endowments. A higher number of observations not only implies that a higher number of foundations support research and innovation, but also that foundations have been more forthcoming in providing data on their activities.

The second column in Table 3.1 shows the expenditure on research and innovation activities in millions of Euros (see Figure 2.18 in Chapter 2). As in the Innovation Scoreboard, four groups of countries can be distinguished. We see that there is one country with a high level of research and innovation funding from foundations in terms of spending: the UK (EUR 1.66 billion). Then follows a group of six countries with moderate levels of research and innovation funding (EUR 347 to 581 million) from foundations, consisting of Norway, Belgium, Sweden, Denmark and Germany. Then there is a large group of countries where

the levels of research and innovation funding from foundations are rather low (between EUR 13 and 196 million), consisting of Hungary, Ireland, Poland, Austria, Italy, Portugal, France, Finland, the Netherlands, Estonia and Switzerland. Finally, a group of countries where very low amounts (less than EUR 1 million to 1.9 million) are spent on research and innovation are Cyprus, Slovakia, Malta, Luxembourg, Lithuania, Bulgaria, Latvia, Slovenia, Romania, Greece and the Czech Republic.

Table 3.1: Selected descriptive statistics for foundation activity in the EUFORI Database by country

		Cumulative amount	Proportion of foundations (%)	
Country	n	Total R&I spending	Are grantmaking	receive income from endowment
Austria	44-64	35.6	77 %	84 %
Belgium	14-38	369.7	58 %	50 %
Bulgaria	5-10	0.4	33 %	38 %
Cyprus	1-7	0.0	0 %	0 %
Czech Republic	29-59	1.9	33 %	25 %
Denmark	9-22	441.8	94 %	94 %
Estonia	10-36	156.5	27 %	5 %
Finland	52-69	95.2	93 %	93 %
France	12-25	69.5	65 %	72 %
Germany	75-152	581.1	73 %	92 %
Greece	0-6	*	20 %	50 %
Hungary	37-253	13.1	48 %	60 %
Ireland	5-14	19.2	85 %	42 %
Italy	13-40	38.8	31 %	38 %
Latvia	6-10	0.5	33 %	25 %
Lithuania	1-4	*	75 %	0 %
Luxembourg	4-9	0.3	33 %	67 %
Malta	2-9	*	11 %	25 %
Netherlands	28-48	142.6	91 %	83 %
Norway	58-102	347.4	77 %	62 %
Poland	15-37	27.5	30 %	18 %
Portugal	11-19	48.1	39 %	73 %
Romania	2-8	*	14 %	29 %
Slovakia	3-11	0.6	89 %	67 %
Slovenia	1-2	*	*	*
Spain	67-208	327.0	17 %	39 %
Sweden	36-87	436.7	94 %	92 %
Switzerland	114-184	195.5	68 %	67 %
United	28-55	1,662.5	93 %	98%
All countries	720-1,591	5,014.1	58 %	51 %
n		990	1,498	899

** < 3 observations*

The skewness in the distribution in research and innovation expenditure by foundations in Europe is striking. The expenditure by foundations in the UK is about four times the amount spent by foundations in Belgium, Sweden and Denmark. It represents one third of the total expenditure on research and innovation by foundations identified in the EUFORI study. The skewness is not just a substantively interesting phenomenon, but it also poses challenges for the statistical analysis. The presence of a few observations with very high values gives them a large weight in the analyses, blurring our view of the majority of countries. To tackle this problem we applied a natural log (ln) transformation of the raw values.

Figure 3.1: Log-transformed amounts of R&I expenditure by foundations in European countries

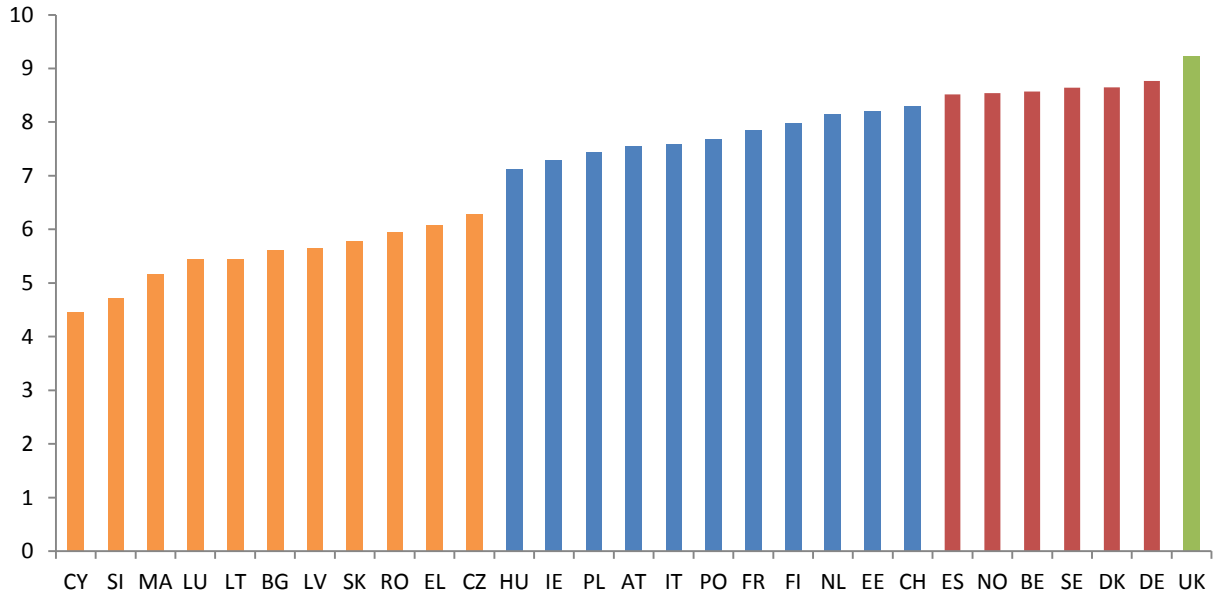


Figure 3.2: Proportion of foundations in European countries that are grantmaking

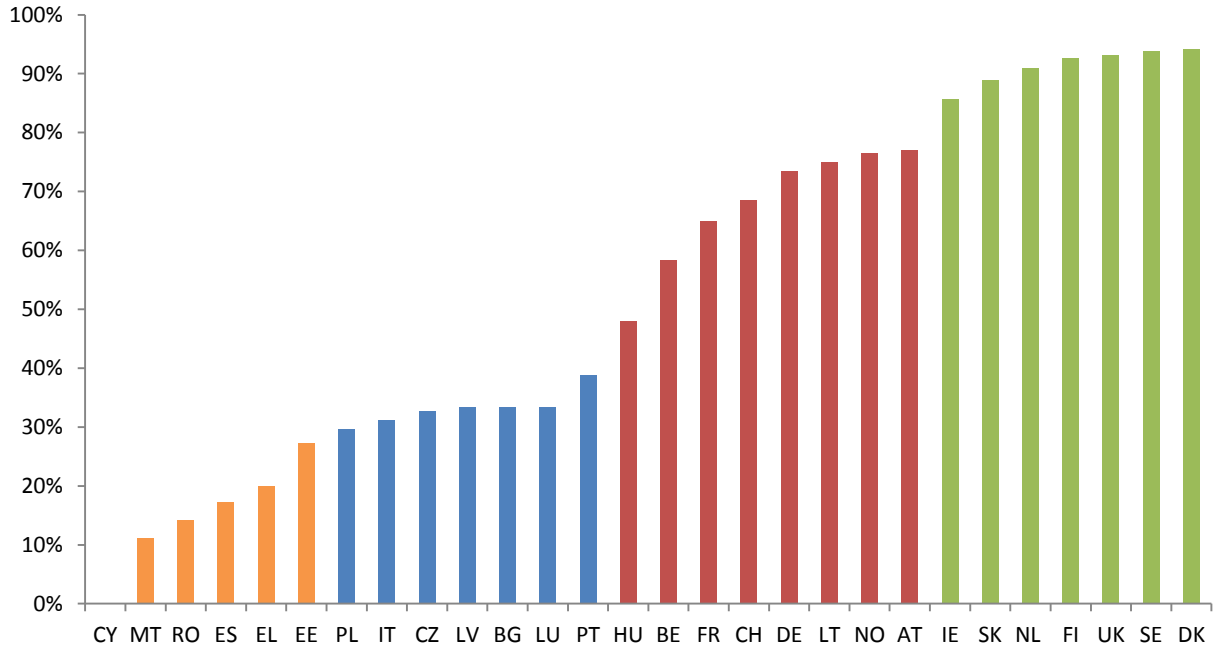


Figure 3.3: Proportion of foundations in European countries that receives income from an endowment

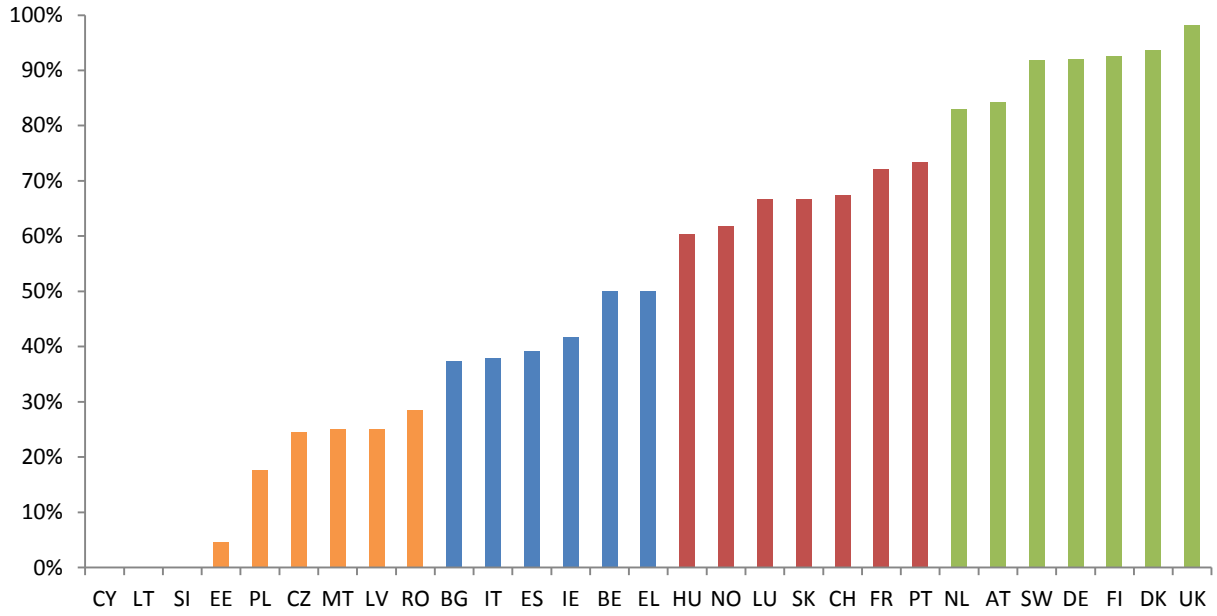
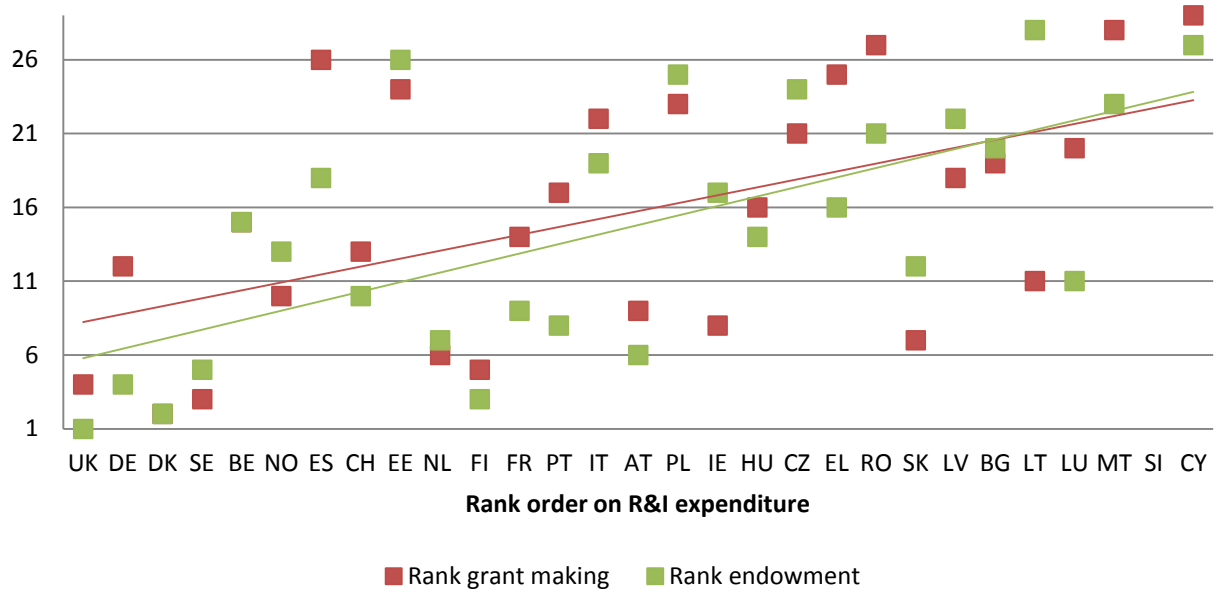


Figure 3.1 shows the resulting distribution of countries, grouped in four categories based on their expenditure in Euros. We see the same order of countries as in Table 3.1, but the values are much closer to one another. Also, when we look at other aspects of foundation activity, such as the presence of grantmaking foundations, we see a large variation between the countries in Europe. Figure 3.2 shows these differences. In Cyprus, Malta, Romania, Spain and Greece less than one fifth of the research and innovation foundations surveyed are grantmaking. In the Netherlands, Finland, the UK, Sweden and Denmark, however, this is 90 % or more. Finally, we also see a large variation in the proportion of foundations receiving income from an endowment (see Figure 3.3).

The proportion of foundations receiving income from an endowment is high in the UK, in most of the Scandinavian countries, the Netherlands and two German-speaking countries (Austria and Germany). A low proportion of foundations receives income from an endowment in Eastern European countries, Spain, Italy, Belgium and Greece.

While the rank order of countries in the three figures is somewhat different, we can see some clear patterns: in countries where foundations invest more in research and innovation the proportion of foundations that receives income from an endowment is higher, as well as the proportion of foundations that is grantmaking. In statistical terms, these patterns are evident from the correlations between the rank order of R&I expenditure, the rank order of the presence of grantmaking foundations (r = .54) and the presence of endowed foundations (r = .65). Figure 3.4 visualizes these relationships. Also the presence of grantmaking foundations is strongly related to the presence of foundations receiving income from an endowment (r = .75).

Figure 3.4: Relationships between rank orders R&I expenditure, presence of grantmaking foundations and presence of endowed foundations



3.2 Why do foundations in different countries in Europe differ in terms of research and innovation activity?

Given the large differences in R&I foundation activity between the countries in Europe, it is a natural question to ask where these differences come from. This question is very difficult to answer. There are many factors that could be responsible for the differences in foundation activity between countries: there are economic and political conditions that influence foundations, religious and cultural traditions, legal conditions, government activity, and the organisation of the philanthropic sector and its relationship with government. Within each of these groups of factors there are specific influences that affect foundation activity. It may be that we have not observed a consistent relationship between different aspects of foundation activity, because there are so many variables at work that influence foundations. The multiplicity of types of influences is a common fact in philanthropy. Research on philanthropic activity according to households and corporations also shows that a large variety of influences are at work (Bekkers and Wiepking 2011; Campbell, Moore and Metzger 2002). This multitude of factors necessitates a multi-disciplinary approach in the field of philanthropic studies.

Here we present comparative analyses of the relationship between a selection of economic, legal, political and cultural characteristics of the countries and foundation activity in Europe. Before we present the results of these analyses, two caveats are so important to keep in mind when reading these results that we are already indicating them here. In the discussion section we will highlight additional limitations. The first caveat that is important to consider is that we only have 29 countries in our EUFORI dataset. This limits our ability to test the empirical relationships between foundation activity and country characteristics. A rule of thumb for the statistical analyses of the kind we are presenting below is that for each country characteristic at least 15 observations should be included. The second caveat is that the selection of country characteristics included in our analyses is a pragmatic choice of the variables that were available to us. These are not always the best measures of the characteristics that theories on philanthropy say are

the most important ones to consider. With these caveats in mind, we think we have identified the most important groups of factors that affect foundation activity, and will try to answer the following question: What are the characteristics of the countries where foundations are more active?

3.2.1 Differences in foundation activity between countries with different foundation models

First we examine how foundation activity differs between countries with different foundation models (view chapter 1 for a summary of these models). Table 3.2 shows how foundation activity on average differs between countries with different foundation models. Once again we see that the level of R&I spending in the UK, the only country with a liberal model in the EU, is very high (EUR 1.7 billion), approximating the total level of R&I spending in all the corporatist countries taken together (EUR 1.8 billion). Social democratic countries follow with EUR 1.3 billion. R&I spending by foundations is low in peripheral and post-Communist countries (just over EUR 200 million).

Table 3.2: Foundation activity according to foundation model

	R&I spending	Grantmaking	Endowment
Liberal	1 662.5	93 %	98 %
Social Democratic	1 321.2	87 %	81 %
Civil society-centered corporatist	954.8	74 %	79 %
State-centered corporatist	439.5	57 %	60 %
Mediterranean corporatist	414.0	20 %	41 %
All corporatist countries	1 808.4	54 %	65 %
Post-Communist	201.6	43 %	46 %
Peripheral	204.7	50 %	32 %

In the UK we also see very high proportions of foundations of the grantmaking type (93 %) and foundations receiving income from an endowment (98 %). Foundations in the UK are followed by foundations in countries with a Social Democratic model, where a high proportion of foundations receives income from an endowment and makes grants.

A large majority of foundations in countries with a civil society-centered corporatist model make grants and receive income from an endowment. In state-centered corporatist countries both proportions are lower (about 60 %). Foundations in Mediterranean corporatist countries, in contrast, are much less likely to make grants and are less likely to receive income from an endowment.

Foundations in peripheral countries (Ireland, Greece and Cyprus) and post-Communist countries show a similar pattern of activity. They combine low levels of R&I spending with relatively high proportions of foundations operating their own programs and low proportions receiving income from an endowment.

To sum up, we see most of the differences emerging that would be expected based on the typology of foundation models. The low proportions of grantmaking foundations in post-Communist and peripheral countries are in line with the theory on foundation models. Foundations in corporatist countries are quite heterogeneous, with Mediterranean corporatist countries closest to post-Communist and peripheral countries. Foundations in state-centered corporatist countries occupy a middle position, while foundations in countries with a civil society-centered model are most similar to foundations in the UK.

3.2.2 How can country differences in foundation activity be explained?

Countries in Europe do not only differ from each other in terms of their foundation model, but also with respect to many other characteristics, such as economic and political conditions, the philanthropic culture, legal conditions and R&D investments by government and corporate enterprise. How are these characteristics related to foundation activity?

In an extensive set of statistical analyses of the EUFORI data, enriched with data on the characteristics of countries in Europe, we have estimated the relationships of foundation activity with economic and political conditions, the philanthropic culture, legal conditions and R&D investments by government and corporate enterprise. [1] We have condensed the R&I expenditure, grantmaking activity (as opposed to being a foundation of the operating type) and receiving income from an endowment into one Foundation Strength Score. [2] The rationale behind this score is that a strong research and innovation foundation spends a higher amount on research and innovation, is able to make grants to third parties, and is relatively independent from other funders such as government and business investors. We have analysed how the presence of these strong R&I foundations is related to the characteristics of European countries.

Figure 3.5 presents these results as a graph. [3] The figure shows what proportion of the variance in foundation activity as measured by the Foundation Strength Score between countries can be explained by different groups of factors. Before we discuss this figure we should note that the differences between countries in terms of foundation activity are mostly due to the characteristics of the foundations and not to country-specific effects. [4] About one third of the differences in R&I foundation activity between foundations in Europe are due to the country in which they were established.

The numbers in Figure 3.5 represent the proportions of this percentage that can be accounted for by various groups of factors. An example: the bar for R&D investments tells us that about half of the differences between countries in terms of foundation activity can be accounted for by the level of investment in research and innovation by other actors such as government and corporate enterprise. This is about 18 % of the total variance between the countries. The bar for economic and political conditions shows that they can also account for about half of the country level variance in foundation activity (17 % of the total

1 A more elaborate explanation of the model is given in Annex III: Theoretical model

2 Details about the measurement procedures are available in Annex IV: Data and methods used in the comparative analysis.

3 The full results can be found on the EUFORI website: www.euforistudy.eu.

4 For R&I expenditure the country level variance is 14 %, while for grantmaking activity it is 30 %. For income from an endowment it is 31 %.

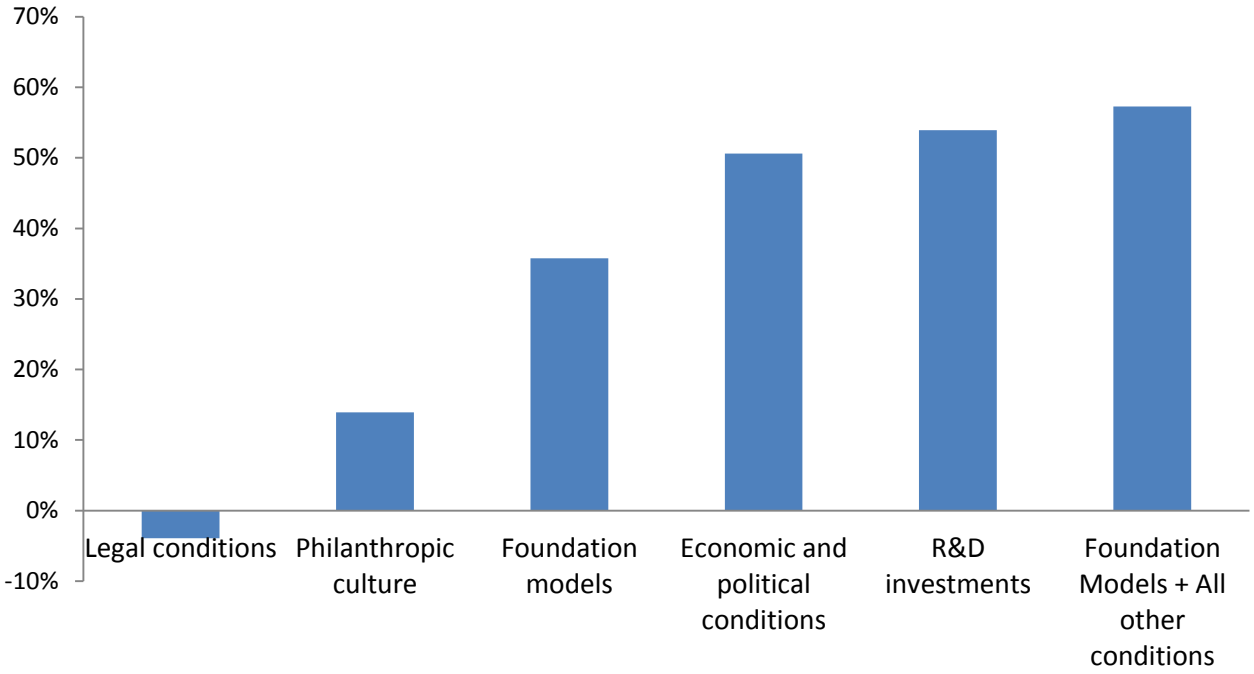
variance). The positive relationship between corporate investments and foundation activity is due in part to the influence of economic and political conditions

Foundation models alone explain about 35 % of the differences between the R&I foundations in Europe. However, when economic and political conditions and R&D investments are taken into account the foundation models explain little of the country-level variance in foundation activity. This is evident from the final bar in Figure 3.5 being only marginally higher than the preceding two bars. This result suggests that differences between foundation models to a large extent reflect differences in economic and political conditions and corporate R&D investment.

In theory, legal conditions could facilitate foundation activity. But we find no support for a link between agreeable legal conditions for foundations and foundation activity. Neither are the amount spent on research and innovation, the type of foundation (grantmaking vs. operating) nor the source of income (from an endowment or not) related to scrutiny by the authorities, the availability of tax deductions for donations, nor to tax exemptions for public benefit organisations such as foundations. These results are surprising. At the very least they suggest that the current legal conditions do not effectively support the work of research and innovation foundations.

When we take a closer look at the specific indicators for foundation activity, R&D investment and the eco-

Figure 3.5: Proportion of country level variance explained by groups of factors



nomic and political conditions we see that many different country characteristics are related to aspects of foundation activity. We find a higher R&I expenditure by foundations in countries with a higher score on the democracy index, offer more business freedom and have a higher GDP. Foundations in countries with a more philanthropic culture do not necessarily spend more on research and innovation, but are more likely to be of the grantmaking type and are more likely to receive income from an endowment. We find

that legal conditions are mostly not correlated with foundation activity. Business investments in research and innovation are higher in countries where foundations also spend more on research and innovation. Government investment is largely unrelated to foundation activity. If anything, government investment is related to marginally lower foundation activity.

3.3 Conclusion and discussion

This chapter has analysed country differences in terms of foundation activity. The activities of research and innovation foundations are determined primarily by characteristics that are specific to their organisations, such as their history and culture, their networks, the source of their endowment, and other similar characteristics. About two thirds of the differences between foundations in Europe are due to organisational characteristics. These factors determine most of the activities of foundations that support research and innovation in Europe.

However, there is also a significant part of foundation activity that is tied specifically to the country in which the foundations are established. Among the foundations that took part in our EUFORI study about one third of the differences in their activity can be ascribed to country characteristics alone.

The most consistent factor associated with the level of foundation activity is the *level of investment by corporate enterprise*. In countries in which corporations invest more in research and innovation, foundations also spend more. Also, research and innovation foundations are more likely to receive income from an endowment and are more likely to make grants to third parties in countries where corporate investment is higher.

Government investment, however, is not related to foundation activity once corporate investment is taken into account. If anything, government investment is related to marginally lower foundation activity. The positive relationship between corporate investment and foundation activity is due in part to the *better economic and political conditions* in countries where corporate R&D investment is higher.

Finally, *legal conditions* are largely unrelated to research and innovation foundation activity.

These results present a first analysis of the country differences in terms of foundation activity. We have used a pragmatic choice of variables that was limited by the low numbers of observations in various countries. Future research should collect more and better indicators for philanthropic culture to capture its potential influence. In our analyses we have not looked extensively at the interrelationships between different groups of factors that could influence foundation activity (as shown in Figure A3.1. in Annex III). Also, we would like to stress that these results should not be interpreted as necessities. We cannot establish the causal direction in the relationship between the variables we have examined.

Also we have ignored how the influence of organisational factors may differ between countries. These issues deserve more attention in future research. Specifically, we recommend further research on the legal conditions that should facilitate foundation activity. Our results suggest that countries that treat foundations in a more agreeable manner do not have a more active foundation sector supporting research and innovation. The national reports clearly indicate that in specific countries the establishment of foundations is affected by fiscal conditions. Comparing different countries in Europe, however, foundations in countries that treat foundations in a more agreeable manner do not more actively support research and innovation. Future research should seek to solve this puzzle.

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4 Strengths and weaknesses of European foundations supporting R&I

The national reports reveal that the strengths and weaknesses of foundations supporting R&I in Europe vary greatly from country to country. The national experts have made an extensive evaluation of the strengths and weaknesses of R&I foundations on a national level, taking into account the specific context of their country (for more information, refer to the national reports). Nevertheless, some common patterns emerge when analysing the strengths and weaknesses of R&I foundations in Europe. In the first section we discuss the common patterns in countries with a strong and weak R&I foundation sector, illustrated by examples from the national reports. What country-specific developments have stimulated the establishment of R&I foundations in countries with a strong R&I foundation sector? What barriers exist in countries with a low level of foundation activity? In the second section we focus on the strengths and weaknesses of R&I foundations' activities in Europe. Compared to other players in the domain of research (e.g. the government), what makes foundations unique? What impact do they have? But also, what can be considered as weaknesses of R&I foundations' activities in Europe?

4.1 Strengths and weaknesses: cases on a national level

The previous chapter helped us to understand the differences between countries in R&I foundation activity. It showed that a significant aspect of the strengths and weaknesses of R&I foundation activity is tied specifically to the country where the foundations were established. Higher R&I expenditure has been found by foundations in countries with a higher score on the democracy index, offer more business freedom and have a higher GDP. Foundations with high levels of R&I spending are most common in the UK and Germany, and in social democratic countries such as Sweden, Denmark and Norway.

The growth of private wealth, due to the industrialization and entrepreneurial success in the second part of the 20th century, had a major impact on the establishment of very large R&I foundations in these countries. The Swedish Knut and Alice Wallenberg Foundation, for example, was founded in 1917 by a donation of SEK 20 million by the chairman and his wife of Stockholm's Enskilda Bank. The foundation is one of the largest private funders of research in Sweden, with a yearly grantmaking budget of SEK 1.3 billion [1]. Also, in Germany and the UK accumulated wealth and economic surplus after WWII were drivers for the establishment of large R&I foundations; examples are Robert Bosch Stiftung, Fritz Thyssen Stiftung and the Wellcome Trust.

Besides the growth of accumulated wealth in some countries there are other country-specific developments that stimulated the existence of large R&I foundations in these countries. One of the strengths of

1 https://www.wallenberg.com/kaw/en

R&I foundations in the UK, for example, is their liberal character and their independence from the state. The UK is, according to the classification of Anheier and Daly (2007), an example of the liberal foundation model (see also Chapter 1). In the liberal model foundations have a significant, clear and distinctive role, mostly parallel to the state. The long history of independent grantmaking foundations in the UK, reinforced by legal regulations in the 17th century, is reflected by the prominence of grantmaking foundations in the UK nowadays.

> *'After the Reformation and the Charitable Uses Act 1601, philanthropy became increasingly secular rather than religious in its purposes and developed a degree of autonomy virtually unknown in continental Europe'.*[1]

In Denmark, foundations play a unique role as owners of large and research intensive companies, often acting as a shelter for high private wealth taxes during the 1970s and 80s. These so-called industrial foundations account for about half of the total Danish R&D expenditure. Many of these industrial foundations combine commercial and charitable activity. [2]

In Sweden the conservative government in power (1991-1994) played an important role in the transformation of the public wage-earner funds (built up through taxes from employers) into private wage earner foundations during the 1990s. Proceeds from these privatisations were used as endowments for new foundations, and many of these were focused on research and higher education. The biggest of its kind in Sweden is the Foundation for Strategic Research, founded in 1994, with the objective of supporting research in natural science, engineering and medicine, which strengthens Sweden's competitiveness. The founding capital was SEK 6 billion [3].

> *'The official reasons behind the creation of these new large foundations, given by the conservative government at the time, were that foundations allowed for a more flexible way of organising and operating, and that the foundation structure was an already well-tested format for managing and distributing resources for research.*

1 Citation from the national report of the UK.

2 See also national report of Denmark.

3 See http://www.stratresearch.se/en/About-SSF/Mission/

Later, it was also argued that the independent position of the foundations and the fact that they were so tightly bound by their original missions also ensured stability and long-term prospects in their operations'. [1]

If we look at countries with a relatively weak R&I foundation sector, we find low levels of R&I foundation activity in Eastern European countries where the philanthropic tradition and the populations' income suffered under Communist regimes. During the Soviet period after WWII, private philanthropic institutions, such as foundations, were dissolved and their assets were confiscated by the state. Private initiative was quelled for a long time and it was no longer allowed to establish foundations.

When the Communist period ended, the revival of the nonprofit sector was quickly reborn in countries such as Lithuania, Hungary and the Czech Republic due to deep historical roots of philanthropy. However, it is evident that a period of nearly 50 years of Communism had a major impact on the contemporary R&I foundation sector in Eastern European countries. Compared to other European countries there is a delayed development of (grantmaking) foundations supporting R&I in these countries. The weakness of R&I foundations in these countries is reflected by their financial vulnerability. Many foundations supporting R&I have a lack of appropriate funds, are mainly of the grantseeking type, have no or small endowments, and are mainly dependent on EU Structural funds or governmental subsidies. In many of the Eastern European countries research is generally perceived as the responsibility of the state and foundations' support for R&I is in a developmental stage. In Lithuania, for example, there are still a lot of barriers for the development of the foundation sector and private R&I funding. Different problems have been identified: a lack of sustainability on a policy level, legal gaps on a regulation level, legacies of soviet mentality on an individual level and a lack of major capital on an economic level [2].

If we look at other European countries where foundations have been historically closely supervised by the state, some positive developments have emerged from the national reports. In countries such as France, Belgium and Luxemburg, classified under the corporatist statist foundation model (Anheier and Daly, 2007; see also Chapter 1), their societies have been shaped by the Napoleonic Code of Civil Law. Legislation was unfavourable and potential donors were discouraged from establishing foundations. This explains why grantmaking R&I foundations did not flourish in these countries until the end of the 20th century. However, major recent changes in legal issues stimulated the creation of R&I foundations in these countries and reduced the role of the state. The creation of shelter foundations in these countries (Fondation de France, Fondation du Luxemburg and the King Baudoin Foundation in Belgium) may also be seen as initiatives to stimulate the creation of research foundations. These foundations enable smaller foundations to be set up under their aegis. A shelter foundation takes charge of the administrative work related to the establishment and operations of a foundation, which has major advantages for potential founders.

1 Citation from the national report of Sweden.

2 See also the national report of Lithuania.

4.2 Strengths and weaknesses: cases on an organisational level

In this section we focus on the common patterns which emerged from the evaluation of the strengths and weaknesses of R&I foundations' activities.

The strengths of foundations supporting R&I in Europe are mainly related to the unique characteristics of foundations. Foundations are able to operate independently, they enjoy a freedom of choice in the projects they wish to support and are less subject to public control. These advantages offer foundations opportunities to make a difference in the research domain.

Agenda setting, raising the public's interest and disseminating research

Foundations are rooted in society, established by 'founders with a passion', work with dedicated professionals and volunteers, and are strongly committed to the goals of the foundation. Foundations derive their legitimacy from the many contacts with the 'capillaries' in society that offer them the opportunity to function 'as the eyes and ears' for research and innovation. This makes foundations well equipped to disseminate research results in a broader public debate. When it comes to research-related activities, informing the public at large about the findings of basic or applied research is a common activity of foundations in Europe (mentioned by 77 % of the EUFORI foundations). The Gjensidige Foundation in Norway, for example, promotes the dissemination of research through supporting 'knowledge centers', which are popular scientific, experience and learning facilities where visitors learn by experimenting with a focus on mathematics, science and technology [1]. Another example of a project engaging the public's interest comes from the Slovenian Science Foundation, which organises annual science festivals where attendees can learn about scientific achievements. Each year the festival is dedicated to various great Slovenian or world-renowned scientists or thinkers in the field of science. The Bank of Cyprus Cultural Foundation, which aims to encourage the research and study of Cypriot civilisation, organises exhibitions, lectures and scientific conferences.

Foundations also play an important role in raising awareness of the importance of research in society. The national reports reveal that foundations stimulate and set the agenda for new developments. La Caixa foundation, for example, coordinates the Responsible Research and Innovation (RRI) Tools project, funded under the European Commission (EC) Seventh Framework Programme (FP7 2007-2013), and aims to build a better relationship between science and society [2].

Health foundations, such as the British Heart Foundation and the Dutch Cancer Society, raise significant amounts of money to fight diseases by supporting research and by raising awareness about the prevention of these diseases. These health foundations represent an important group of Dutch foundations supporting research and innovation.

1 Example derived from the national report of Norway.

2 See http://www.rri-tools.eu/; see also the national report of Spain.

Support niches, underdeveloped areas and off the beaten track projects

Independence from the government and other players in the domain of research allows foundations to continue supporting those areas which they believe to be in greatest need of support. Foundations adopt 'orphan research' issues by supporting niches and underdeveloped areas which are neglected by research policies. While the government is largely concerned with creating facilities for all its citizens, foundations are able to be more selective and to make donations to less obvious causes. The Volkswagen Foundation, for example, encourages junior researchers from all disciplines with the 'Freigeist fellowship' to apply for funding for projects off the beaten track [1]. 'The fellowship is for young researchers with a strong personality, a creative mind, an ability to identify and use freedom, dedicated to overcoming resistance'. [2]

Foundations as innovators and 'risks-takers'

As foundations are more flexible in many situations, they are well placed to initiate new projects. By injecting a small amount of money to get an initiative 'off the ground', they can prompt other parties, such as the government, to finance its continuation. The Amsterdam University Foundation in the Netherlands provided the seed money for the digitalisation of the Iconographica Zoologica. The contribution was not nearly enough to create a digital collection of prints, but functioned as seed money for other partners to step into the project. Finally, the Dutch government provided the final money needed to finish the project [3]. The Volkswagen Foundation's funding initiative called 'Experiment! - in search of bold research ideas' tries to pave the way for fundamentally new research topics even though the outcome is indefinite. A concept failure as well as unexpected findings is an acceptable result [4].

It should be noted that the national reports contain a variety of examples of foundations supporting R&I in an innovative way. Please refer to the innovative examples of the country reports.

Sustainability and flexibility

Foundations are able to commit themselves to long-term sustainable research issues; the larger ones are discovering more and more the added value of structural support. On the other hand foundations are able to adapt their activities and focus of support easily to the changing environment and the needs of society. Foundations are skilled to quickly respond to new developments and social and scientific challenges. The Wellcome Trust's Ebola Research Funding Initiative is an example of the flexibility and resilience of foundations. As our national experts from Sweden say: 'foundations are able to identify important areas of research, quickly allocate resources and at the same time act as an enduring partner'. [5]

1 Example derived from the national report of Germany.

2 See http://www.volkswagenstiftung.de/nc/en/funding/persons-and-structures/freigeist-fellowships.html

3 Example derived from the national report of the Netherlands.

4 Example derived from the national report of Germany; see also http://www.volkswagenstiftung.de/en/funding/challenges-for-academia-and-society/experiment.html

5 Citation from the national report of Sweden.

The strengths of foundations supporting R&I in Europe could be characterised by their specific role in agenda setting, raising the public's interest, disseminating research, supporting niche and underdeveloped areas as well as off the beaten track projects. Moreover, foundations as independent and risk-taking organisations are well placed to initiate new and innovative projects.

Looking at the weaknesses of foundations' activities, a couple of common patterns have emerged, mainly related to the large number of small foundations which are characteristic for the European R&I foundation landscape.

Financial dependence of many (small) foundations

The European landscape of foundations supporting R&I is characterised by a few well-established foundations with substantial grantmaking budgets and a prominent role in the research arena, as well as many small foundations with modest resources, often operating in the background. The national reports reveal that most financially vulnerable foundations are small grantseeking foundations characterised by a lack of appropriate funds, no or small endowments and mainly dependent on EU structural funds or governmental subsidies. As a consequence the financial independence of these foundations is low, which could be considered as a weakness of a significant part of the European R&I foundation landscape. Although financially weak foundations exist in many European countries, they are most prevalent in Eastern European countries and countries such as Greece, Cyprus, Malta and Ireland.

Lack of professional foundation governance

Strongly connected to the financial weakness of many smaller foundations supporting R&I in Europe is the lack of professional governance of these foundations. They are often run by dedicated voluntary boards without an office with paid staff. This is well illustrated by a national expert from Hungary:

> *'Moreover, very few of the foundations can employ any kind of well-paid full-time employees. This is all the more problematic because voluntary boards (mainly consisting of scholars busy with their research activities) are rarely prepared for professional fundraising, management, communication, and marketing activities, especially not on a daily basis'.* [1]

1 Citation from the national report of Hungary

Lack of research identity, dialogue and visibility

Another weakness which emerged from the national reports, is the lack of a common research identity among foundations supporting R&I. Research is often not seen as a purpose/field in itself, but is instead used as an instrument for other purposes and areas in which foundations specialise. Approximately two thirds of the EUFORI foundations are not exclusively focused on R&I, and many of them do not define themselves as a research community. The lack of a common identity is reflected by a lack of dialogue between foundations, let alone the existence of R&I collaboration infrastructures or umbrella organisations for foundations active in the research arena. This could be illustrated by the evaluation of the strengths and weaknesses of the Dutch R&I foundations:

> *'The strength and dominance of the Dutch health foundations also signifies a weakness in the Dutch foundation sector: the overall narrow focus of foundations. We find that foundations often stimulate a particular research field such as the medical sciences and do not support science on a wider level. The very specific focus of foundations is also related to the fact that research is used as an instrument for other support areas rather than being a purpose in itself. Foundations therefore do not identify themselves as a "research" foundation and are not visible as such which makes it difficult for the public to find them. This lack of research profiling could also be a barrier for potential collaborations between foundations that have mutual goals but are not able to find other like-minded foundations'.* [1]

1 Citation from the national report of the Netherlands

References

Anheier, H.K. and Daly, S. (eds). (2007). *The Politics of Foundations: A Comparative Analysis*. Routledge: London and New York.

5 General conclusions

This concluding chapter reviews the key findings and discusses the main issues that have arisen in this report. The EUFORI Study was carried out by a network of researchers, foundation officers and scholars from 29 European countries (EU27, Norway and Switzerland). The conclusions are based on an extensive data analysis of the foundations participating in the online survey of the EUFORI Study (n=1591) and a qualitative and in-depth analysis of the national country reports.

Foundations supporting R&I in Europe: a relatively young and growing sector

While foundations in many European countries have a rich history in the field of poverty and social care, strongly related to the Church and sometimes dating back to the late Middle Ages, foundations in the field of research are a relatively new and growing phenomenon in Europe. Based on the information in the national reports we have seen in many countries a considerable growth in the number of newly established foundations in Europe since WWII. Nearly three quarters of the EUFORI foundations supporting R&I have been established since the 1990s. This is not only in Eastern Europe, where it was not possible to set up a foundation under Communist regimes, but also in Western Europe. However, there are countries with a longer history with regard to foundations supporting R&I. In the UK, for example, 40 % of the foundations in the EUFORI sample were established before 1949. In Sweden research foundations have also historically played an important role in the research field.

Foundations spent at least EUR 5 billion on R&I in 2012

In 2012 at least 991 foundations in Europe spent more than EUR 5 billion on research and innovation. The support of foundations for research and innovation in Europe has not been studied previously on such a large scale. Although this is the contribution of the most substantial part of R&I foundations in Europe, including the most important players in the research arena, this amount should be considered as a lower bound estimate. More than one third of the foundations participating in the EUFORI study (n=1591) were not able or reluctant to provide financial information about their expenditure on R&I. Moreover, out of the 12 000 – for the purpose of this study – identified foundations which could potentially support R&I in Europe, only 13 % participated in the EUFORI Study. It is therefore expected that the economic relevance of R&I foundations in Europe is higher than the lower bound estimation of EUR 5 billion.

Nonetheless, EUR 5 billion is still a considerable amount of money, especially when it is compared to the EU budget for Horizon 2020 (EUR 70.2 billion for a period of seven years). Assuming that the amount spent in 2012 is representative of other years, a rough calculation of the foundations' expenditure on R&I for the same period would amount to EUR 35 billion, accounting for half of the Horizon 2020 budget. Obviously, we should be careful when drawing conclusions about foundations' expenditure on R&I over a period of

time, as the EUFORI Study presents data for one year (2012). Foundations' support can fluctuate year by year. Discontinuity or lack of stability are often argued as one of the weaknesses of foundations' support, as foundations enjoy a high degree of autonomy and freedom in the allocation of funds. However, the EUFORI data report optimistic findings with regard to the expectations for research and innovation support in the following year (2013). A quarter of the 915 foundations that reported on their expenditure for the following year expected an increase. A large majority (61 %) expected that their expenses would remain the same. Only 12 % expected a decrease in their expenditure and 2 % expected their expenditure to R&I to cease. Compared to the previous year (2011), many foundations also reported positive findings. More than a quarter (26 %) of the 943 foundations reported that their expenditure on research and/or innovation had increased compared to the year before. A slight majority (53 %) expected their expenditure to remain unaltered compared to the previous booking year. 17 % of the foundations reported less positive findings: 150 foundations (16 %) indicated that their expenditure had decreased, and in 12 cases the expenditure had been discontinued.

Despite the fact that we can conclude that the contribution of foundations in the research arena in Europe is substantial, the economic weight of foundations' support for R&I is small compared to investment from other sectors such as the government and business sector. The gross domestic expenditure on R&D (GERD) in 2012 in the EU27 plus Norway (there was no 2012 data available for Switzerland) [1] accounted for EUR 275 billion (the business sector spent EUR 174 billion, the government EUR 34 billion Euros, the higher education sector EUR 65 billion and the private nonprofit sector EUR 2 billion). Although the expenditure of foundations is covered in the EU R&D statistics it was until recently not possible to distinguish the funding part of foundations. The EUFORI Study is the first attempt at a comprehensive mapping of the overall financial contribution of foundations supporting research across the EU. With a total (lower bound estimation) of EUR 5 billion the foundations' share in the gross domestic expenditure (GERD) of the EU27 (plus Norway) is relatively small (about 2 %).

This reflects how foundations see their own role in the research arena, that is complementary. Almost three quarters of the EUFORI foundations described their role as complementary to public support or the support of others, e.g. the business sector. It should be acknowledged, however, that from the beneficiary perspective the foundations' contribution can make a significant difference. Foundations' support for projects/programs on researcher mobility (career structure and progression) and the dissemination of research (seminars, conferences, etc.), for example, are of great importance for the researchers involved.

For 44 % of the foundations in the EUFORI Study, the initiating role is prominent. Foundations which could be characterised as independent and risk-taking organizations provide the seed money for new and innovative initiatives, sometimes in undersupplied or underdeveloped areas. This can be illustrated with the example of the Shell Foundation in the UK, which provided USD 3.5 million in seed funding to leverage an additional investment of USD 25 million to scale up and spin off the 'Breathing Space Programme: Indoor air pollution'. [2]

1 http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

2 Example derived from the national report of the UK.

In this regard we share the conclusion of a former study on R&I foundations in Europe (Giving more for research, 2005: 8) [1]: 'Foundations not only bring with them money (quantity) but also competences and unique characteristics (quality) which contribute to the pluralism of R&D funding'.

A skewed landscape of foundations supporting R&I

There are large differences in foundations' R&I expenditure between the countries in Europe. The top countries contributing to research are the United Kingdom (EUR 1.66 billion), Germany (EUR 0.58 billion), Denmark (EUR 0.44 billion) and Sweden (EUR 0.44 billion). Also striking is the skewness of the distribution in R&I expenditure by foundations in Europe. The expenditure of foundations in the UK is about four times the amount spent by foundations in Denmark and Sweden. Moreover, these four countries are responsible for two thirds of the total expenditure on R&I by the foundations identified in the EUFORI Study.

It should be noted that in many countries the total expenditure on R&I is heavily influenced by a few dominant players. The UK, for example, is the top contributor, but this is mainly due to the largest research foundation in the dataset: the Wellcome trust. This foundation by itself is responsible for 44 % of all research expenditure in the UK, and would rank 2nd place in Europe if was considered as a country. The same situation is true in other countries. In Portugal, for example, the Calouste Gulbenkian foundation is the main contributor to research, responsible for 50 % of the country's foundation expenditure on research.

A few very large foundations in Europe are responsible for the largest share of the total expenditure on R&I in Europe. We can conclude that the foundation landscape consists of many smaller foundations which are overshadowed in the statistics by a few well-known, very large foundations.

Financially vulnerable foundations most prevalent in peripheral and post-Communist countries

The EUFORI Study revealed that most R&I foundations in post-Communist (Eastern European countries) and peripheral countries (Greece, Cyprus and Ireland) are characterised by a lack of appropriate funds. Foundations are mostly grantseeking, have no or small endowments and are mainly dependent on EU structural funds or governmental subsidies. As a consequence the financial independence of foundations in these countries is low.

1 European Commission (2005) 'Giving more for research in Europe: the role of foundations and the non-profit sector in boosting R&D investment'. Directorate-General for Research: EC

Variations in terms of R&I foundation activity between countries in Europe reflect the economic and political conditions and corporate R&D investment

The large variation in foundation activity between countries in Europe is due to a multitude of factors. Most aspects of foundation activity show moderately strong relationships with economic and political conditions. We find a higher R&I expenditure by foundations in countries with a higher score on the democracy index , offer more business freedom and have a higher GDP. These economic and political conditions foster corporate enterprise investments in R&D, which are positively related to the R&I expenditure of foundations. Foundations are also more likely to be of the grantmaking type and to rely on income from an endowment in countries with higher levels of business investment in R&D. Government investment is largely unrelated to foundation activity. Finally, we found that the current legal conditions are largely uncorrelated with foundation activity. Neither the amount spent on research and innovation, the type of foundation (grantmaking vs. operating) nor the source of income (from an endowment or not) are related to scrutiny by the authorities, the availability of tax deductions for donations, nor to tax exemptions for public benefit organisations such as foundations. This result suggests that the current legal treatment of foundations does not encourage foundation activity supporting research and innovation. Future research is required to uncover why legal treatment is not correlated with foundations' spending on R&I.

A fragmented landscape of foundations supporting R&I

Due to a lack of systemised and exhaustive data on foundations in many countries the total number of foundations active in the area of research and innovation in Europe is unknown. The European landscape of foundations supporting R&I can be characterised by a few very large, well-known foundations with substantial budgets available for R&I and many small foundations with modest resources that often operate in the background. Following the strategy suggested in the FOREMAP Study, the EUFORI Study used data from existing registers and snowball sampling to build a comprehensive database of foundations supporting research and innovation. It turned out that the identification of foundations supporting R&I in Europe was a challenging one. Even in countries with a register or database it was still not easy to create lists, as the databases were not always up to date. The national experts identified more than 12 000 foundations which could potentially support R&I. We deliberately say 'potentially' as the sample might be blurred by the inclusion of non-existing or non-active foundations. It should be noted that the EUFORI Study reported on the most substantial part of the R&I foundation landscape in Europe.

So far the landscape of foundations supporting R&I in Europe may be described as young, growing and skewed. Another important conclusion resulting from the EUFORI Study is that many foundations supporting R&I do not consider their own foundation as an R&I foundation and do not define themselves as a research community. This could be explained by the fact that research and innovation is often not the exclusive focus of foundations. Approximately two thirds of the EUFORI foundations do not exclusively focus on R&I. Another explanation (which is closely linked to the previous one) lies in the elusive character of research and innovation. Research and innovation is often not seen as a purpose/field in itself, but is instead used as an instrument for other purposes and areas in which foundations specialise (such as health, technology and society). As a consequence, the landscape of foundations supporting R&I in

Europe could be described as fragmented. The lack of a common research identity among foundations supporting research and innovation is reflected by a lack of dialogue between foundations (occasionally between foundations that deal with similar topics, e.g. health foundations), let alone the existence of an R&I collaboration infrastructure or umbrella organisations for foundations active in the research arena.
On a European level, however, there is some movement towards a collaboration infrastructure. The EFC Research Forum provides a platform for research funding foundations to learn, collaborate and advocate together. Current member foundations can be found among the very large and well-established research foundations in Europe, such as the Robert Bosch Stiftung, 'la Caixa' Foundation, Stiftelsen Riksbankens Jubileumsfond, Fundação Calouste Gulbenkian, Lundbeckfonden, VolkswagenStiftung, the Wellcome Trust, Fundación Barrié, the Foundation for Polish Science, the European University Association, and Fondazione Cariplo. [1]

127 billion Euros in assets: a considerable amount of money

The assets of 1 052 foundations supporting R&I in Europe amounted to EUR 127 billion in 2012. This amount should be considered as a lower bound estimate since not all foundations participating in this study provided information on their financial assets. It is, on the other hand, estimated that the asset information of the largest foundations contributing to R&I is included.

Estimates of the collective assets of European foundations are quite rare, but the Heidelberg Centre for Social Investment reported in their Feasibility Study on a European Statute (2007) that the total assets of European (EU27) foundations range between EUR 350 billion and EUR 3 trillion. This is a rough estimate, but it demonstrates that the economic weight of the assets of the R&I foundations participating in the EUFORI study is very substantial. The lower bound estimate of EUR 127 billion in assets is higher than the GDP of Hungary (EUR 98 billion) and Latvia (EUR 23 billion) together.

Whether this substantial amount of money could be considered as an untapped potential for R&I in the future will be discussed in the next chapter.

Cross-border giving in Europe in its early stages

Foundations supporting R&I in the EUFORI Study allocated 90 % of their expenditure for these purposes at a national or regional level. Based on the information in the national reports this is mainly caused by the statutes of a foundation which often impose restrictions on the geographical focus of a foundation. Moreover, the small financial basis of many foundations do not allow them to become active on an international level. However, this does not mean that foundations' support is not internationally oriented. From the FOREMAP Study it became apparent that foundations may fund the national dimension of an international research progam, or they may fund scholarships and chairs in their own country for outstanding researchers from abroad.

1 http://www.efc.be/programmes_services/thematic-networks/research/Pages/default.aspx

There are only a few big foundations in Europe that operate across national borders. The VolkswagenStiftung in Germany, for example, has a strong tradition in supporting the internationalisation of research in many parts of the world. The EUFORI Study results show that only a small percentage of the quarter of EUFORI foundations that operate across their national borders experience difficulties. However, based upon these data we cannot conclude that barriers do not exist. It might be unsurprising that foundations already operating abroad hardly experience any difficulties. Foundations that are currently operating on a national level may face barriers that prevent them from cross-border giving.

In February 2012 the European Commission presented a proposal for a European Foundation Statute in order to facilitate the cross-border activities of public benefit purpose foundations and to make it easier for them to support public benefit causes across the EU. The European Foundation Centre (EFC) and the Donors and Foundations Networks in Europe (DAFNE) play an important role in increasing awareness and support for the creation of a European statute for foundations at a European and national level. In order to illustrate and justify the need for a Statute, the EFC collected many concrete examples, where foundations share their experiences and views on cross-border giving (EFC, 2012). The Portuguese national report illustrates that obstacles related to bureaucracy and administrative burdens were experienced when foundations carried out the implementation of joint projects on an international level. Also, from the donor perspective tax benefits with respect to donations made to foundations abroad are limited.

On the 16th of December 2014 the new Juncker Commission decided that the European Foundation Statute will not be part of its so-called 'better' regulation agenda for 2015. The European Foundation Statute is one of the 80 proposals that the European Commission has decided to withdraw from the legislative agenda.[1]

1 http://www.efc.be/programmes_services/thematic-networks/research/Pages/default.aspx

6 Recommendations: next steps

Introduction

In this final chapter we present recommendations based on the results of an extensive survey of 1 591 foundations supporting R&I in Europe and a qualitative analysis of 29 different country reports. Due to the diversity in cultures, historical contexts, and legal and fiscal frameworks of European countries, the recommendations are general in nature. It should be noted, however, that all the countries have their own national country reports, including analyses, best practices, conclusions and extensive recommendations.

If we take the results and conclusions of the former chapters into account, what's the overall diagnosis of the state of the art of foundations involvement in EU research and innovation? At the level of descriptive statistics we have concluded that foundations contribute a significant amount of money to R&I (annually at least EUR 5 billion – a lower bound estimation – in comparison to the EC annual R&I investment of approximately EUR 10 billion). If we look at the comparative analysis, explaining variables have been explored; foundation activity show moderately strong relationships with economic and political conditions. We have found higher R&I expenditure by foundations in countries with a higher score on the democracy index, offer more business freedom and have a higher GDP. Another important conclusion from the study is that the landscape of foundations supporting R&I in Europe could be characterised as being fragmented; dominated by a few very large foundations in the research arena.

Considering the underlying potential, actions towards greater support by foundations for research and innovation should and must involve engaging all actors: national governments, EU institutions, the foundations themselves, the corporate sector, universities and other research institutes, and the public at large. 'Action always happens in situations, their success depends upon the way the action is performed by specific actors in specific situations'. [1]

The report's recommendations underline the importance of a clear commitment on a political level to move things forward. Also, next to a clear commitment at a political level, the foundations supporting R&I should identify common issues, interests and needs, and commit themselves to fulfilling those needs.

The main objective of the recommendations made in this final chapter is to increase the potential of R&I foundations in Europe. Specifically, the recommendations aim to:

- increase the impact of existing R&I foundations;
- increase the funding by R&I foundations to R&I;

1 Kaufmann, F-X. (1987) In: K. Hurrelmann, F-X. Kaufmann and F. Lösel (Eds). Social Intervention: Potential and Constraints. Berlin/New York: De Gruyter p. 3-4

- increase the income of R&I foundations;
- create new R&I foundations.

Recommendation 1: Increase the visibility of R&I foundations

This recommendation is addressed to foundations, national governments, the EC and EU administration, businesses and the public at large. It relates to the current fragmented landscape of R&I foundations in Europe. The landscape of foundations in Europe is characterised by a few well-established foundations and many smaller foundations with modest resources mainly operating in the background.

Growing visibility will enhance the impact of existing funding. If foundations become more aware of each other's activities, the effects and impact of their contributions can be increased. Moreover, the other stakeholders involved such as the business community and research policy-makers will become knowledgeable about the foundations' activities. From the perspective of the beneficiaries, research institutes, universities and researchers will more easily find their way to foundations. Visibility will lower the transaction costs for all the parties involved:

- For foundations, governments and businesses it will increase their knowledge about ongoing research/new research funded and vice versa.
- For grantmaking foundations it will facilitate the review process of research proposals and submissions; it is to be expected that more visibility will reduce the amount of incorrect applications.
- For the beneficiaries of the foundations' support (research institutes, universities and researchers) – the grantseekers – it will increase their funding opportunities, they will more easily find their way to foundations, and it will facilitate submission processes.
- For potential (major) donors it will offer visible causes to benefit. Increasing the visibility of R&I foundations could have a positive effect on potential (major) donors as it could encourage them to support a research foundation.

Increasing the visibility of and information about R&I foundations was already addressed by an expert group in 2005. [1] They argued: '.. foundations and their donors would be more aware of the foundation landscape (increasing collaborative working and, possibly, giving), foundations' contribution to various sectors could be properly assessed and the information could inform policy-making in this area. It is in fact a prerequisite to other actions'. [2]

The present EUFORI study is a step forward. A lot of information is now available. Next to this synthesis report, 29 country-reports, new data, an active network of researchers and the EUFORI website can contribute to the profiling of the R&I foundation sector in Europe.

1 Report 'Giving more for research: the role of foundations and the non-profit sector in boosting R&D investment' p. 62

2 Oc. p. 62

With the exception of some large and well-established foundations in Europe, there is a lack of a common research identity among the foundations supporting R&I in most countries. Research and innovation are often not seen as a purpose/field in itself but are instead used as an instrument for other purposes and areas in which foundations specialise (such as health, technology, society). This is reflected by a lack of dialogue between the foundations supporting R&I (occasionally between foundations that deal with similar topics, e.g. foundations supporting cancer research).

Bringing foundations together at a European level and following the recommendations of the expert group from 2005, the European Foundation Center (EFC) created the European Forum of Research Foundations. This forum provides a platform for a group of large and well-known R&I foundations in Europe. In order to increase the visibility of foundations supporting R&I at a national level, the encouragement of the creation of national forums of research foundations is recommended as the next step. The opportunities and mutual benefits for foundations supporting R&I at a national level should be explored.

Next step: Explore the opportunities and mutual benefits of the creation of national forums of research foundations

Recommendation 2: Explore synergies through collaboration

Unity in diversity is one of the main challenges for all the players involved in the R&I domain. These players can be distinguished in the domain of research (governments, business, foundations and research institutes/researchers), each with their own distinctive role. Together these groups can make a difference in increasing the potential for R&I. They can create synergy through collaboration, which should be interpreted in the broadest sense, varying from information sharing, networking, co-funding and partnerships. Mutual advantages can be derived from pooling expertise, sharing infrastructure, expanding activities, pooling money due to a lack of necessary funds, avoiding the duplication of efforts and creating economies of scale.

Get to know each other, meet and see where to reinforce each other's efforts

Based on the conclusions of the EUFORI Study there is an indication for the need for improved dialogue, information exchange, networking and cooperation between the foundations supporting R&I, as well as between foundations, governments, business and research institutes (researchers). The needs, opportunities, mutual benefits and barriers for collaboration should be further explored, including mutual responsibilities when cooperating. The creation of national forums or networks of foundations supporting research and innovation, regular meetings between the foundations and other stakeholders involved (national government, EU government, research institutes and business) could bring these groups together.

Next step: Launch a Collaboration Infrastructure Study

An EU-wide study is recommended on the needs, opportunities, mutual benefits and barriers for collaboration between foundations, national governments, the European Commission, the business sector and

research institutes. A network of national experts (mostly members from ERNOP) built for the EUFORI study can be of added value for this study and can facilitate the collaborative relations between the EC/RTD, the R&I foundation sector and other stakeholders in Europe. It would be well-advised to set up an independent expert group before the start of this study with selected experts and stakeholder representatives in the field of foundations, the business sector, research institutes and public authorities at a national and European level. The expert group should provide input for the design of the study and could adopt an advisory role. Subsequently, it is recommended that the study will be finished by a follow-up conference for all the players involved aimed to discuss the implementation of the outcomes of the Collaboration Infrastructure Study.

In this call for collaboration we have to consider two possible, interrelated pitfalls; namely the danger of 'substitution' and the danger of threatening the independence of foundations. Foundations, and civil initiatives in general, make their own choices and preferences and are based on social democracy. Governments, on the other hand, have their own responsibility based on political democracy. Businesses have their own market-driven values. Sometimes they reinforce each other, sometimes they may act as opponents. It concerns different worlds, differing in terms of constitution, values, legitimacy and organisation style. The independence of private R&I foundations should be respected. Foundations derive their legitimacy from many contacts with the 'capillaries' in society, thus offering them the opportunity to function 'as the eyes and ears' for innovation. This grass-roots connection represents the philanthropic tradition in Europe: 'voluntary action to serve the public good'.

Recommendation 3: Create financially resilient foundations

This recommendation is addressed to foundations. The EUFORI Study reveals that the most financially vulnerable foundations are small grantseeking foundations characterised by a lack of appropriate funds, no or small endowments, and are mainly dependent on EU structural funds or governmental subsidies. To assure their sustainability, foundations should therefore aim to become financially resilient, less dependent on uncertain or single streams of income.

Diversify sources of income

To assure the resilience of (smaller and medium-sized) foundations, the dependency of a single income source need to be reduced or should be considered as a carefully selected strategy for foundations with a specific purpose. The creation of a broad income base is only likely to be successful if the importance of a foundation's mission is shared across different sectors in a specific country. Adding innovative fundraising strategies (e.g. crowdfunding), might be another strategy to reduce dependency.

Building endowments

Broadening the financial base of foundations can also be achieved by establishing an endowment. Foundations that are currently reliable on a single source of income should consider working on building an endowment. Moreover, in order to safeguard survival, foundations working to build an endowment should also consider joint ventures with other foundations that are facing the same issues, or by joining a shelter foundation.

Explore the opportunities in creating and investing in social ventures

Collaboration by foundations with commercial enterprises could be a next step, taking the form of social ventures or social enterprises. Proceeds from privatisation and the raising of private equity invested in a new breed of foundation as 'Social Venture Foundations' could be one outcome of this kind of collaboration. Second, we suggest that the combined investment of commercial enterprises and foundations with a financial and societal desirable return might raise the amount available for research and innovation. Innovative start-ups and SMEs can provide a feasible scale of operations.

Besides creating social ventures, another opportunity to become financially resilient would be by investing in (new) social ventures. Through this, foundations can potentially use their assets instead of their annual revenue to realise their missions. From the EUFORI Study, we have learned that foundations hold around EUR 127 billion Euros in assets. A part of these assets would potentially be available to be invested in research and innovation. However, an important challenge that comes with using assets to raise these investments in research through social ventures consists of the characteristics of the assets available. Most assets are invested for the long term. An important recommendation to national governments and the European Union lies in facilitating investment in research and innovation ventures, e.g. by guaranteeing investment (risk) by foundations through a national bank or the European Investment Bank, or by using a system of 'matching' foundations' investments in research and innovative ventures, thereby lowering the risks involved. This system could be created following the EU Investment Plan launched by EC President Juncker in November 2014.

Introduce a system of 'matching funds' for foundation-supported research projects at both a national and EU level

Next to matching investment in social ventures, national governments and their EU counterparts are advised to provide matching funds for grants made by foundations to R&I projects. Examples of these matching funds can be found in Norway and the United Kingdom.

The outcomes of fundamental research may not directly lead to any particular application or innovation. Much more than applied research, basic research is dependent on long-term financial commitments. As a consequence, support for basic research in particular could be stimulated by the introduction of matching funds.

Providing matching funds could also function as a way to enable foundations to build an endowment. The national report from the United Kingdom can serve as an inspirational example to stimulate corporations and foundations to invest in building an endowment with a specific research focus, while the government provided the matching funds.

This system could consist of a mechanism that induces a matching grant from the government after foundation support has passed a certain amount, and could be limited to a maximum amount or a percentage of the total project. In addition, this mechanism might not only be applicable for foundations' grants to (basic) research and innovation, but also for the donations of commercial enterprises and individuals.

It is generally understood that a system of matching grants is more effective than indirect support by using indirect taxation measures. A system of matching grants can be applied to all desirable societal causes, but if it only aims at an increase in donations to R&I, part of the system could be to provide the matching funds to R&I-related donations only.

Recommendation 4: Improve the legal and fiscal system

The national reports presented in this study display a variety in the way national legislators treat foundations, both legally and fiscally. Some national reports pointed out that the legal and fiscal conditions seem to hamper the establishment and functioning of foundations supporting R&I.

Moreover, the different legal treatment of foundations in different countries limits cross-border giving. The following recommendations are focused on reducing legal barriers for the creation and functioning of foundations, and are addressed to national governments for their implementation, while the EC can play a facilitating role by providing a platform to exchange information on best practice.

Remove barriers and streamline regulations to set up a foundation

In many EU countries, state approval is required to establish a foundation. However, some legislators put in place even stricter rules about the mission, operations and organisational structure of foundations. Reports from the Czech Republic and Hungary indicate that legislators do not promote or stimulate foundations as a legal structure to support research and innovation. However, in some countries (i.e. Italy, the Netherlands, Sweden), there are very few formal requirements to start a foundation. Another liberal model to engage in philanthropic activities by setting up a foundation can also be found in the UK; the longstanding liberal model is considered one of the reasons why there is such a thriving foundation sector. [1]

European countries vary enormously in terms of the legal types of foundations. Some countries distinguish between multiple forms of foundations, which may all serve a specific purpose (e.g. Austria, France, Portugal), while others simply recognise one type of foundation that can have any legal purpose (e.g. Germany, the Netherlands). This complex structure may lead to unwanted outcomes for both legislators and foundations, as the Austrian and Belgian reports indicate.

Another requirement that can be found in many EU countries is the requirement to have a minimum starting capital to set up a foundation. For many young (fundraising) foundations or foundations that rely on government subsidies (e.g. in Eastern Europe), this initial capital may form a barrier to starting up a foundation. Keeping in mind that foundations benefit from an enabling environment, national governments might, after carefully reviewing the process of setting up a foundation, consider removing and streamlining the formal requirements to set one up.

1 Although not a technical term, the word 'foundation' is increasingly used informally in the UK to refer specifically to charities which have an independent, sustainable source of funding, often a large endowment of money, and which have as their main activity the funding of other charitable purposes, individuals and organisations through grants.

Ideally, there should be a legal form of foundation that is recognised as such in all the EU countries. The European Foundation Statute, as initiated by the European Commission and supported by the European Foundation Centre, might serve as a blueprint for such an EU-wide recognised foundation. Several national reports point out that this will lead to an increase in cross-border grants, and will broaden the scope of potential projects for R&I foundations. However, if it is unfeasible, an incremental strategy would be to accept the strictest legal system as a starting point as to be accepted by all, and to gradually move to an EU-wide understanding of what a foundation is. Some European countries (e.g. the Netherlands) already recognize legal entities that have been established in other European countries. This process could be stimulated.

Remove barriers to foundations' operations

Some legislators forbid or put strict rules on foundations to engage in economic activities besides their public benefit purpose, nor do they allow the freedom to invest their endowments. This is, for example, the case in in the Czech Republic and Slovakia. If they increase private support for the public good, foundations should be able to develop economic activities that allow them to support research and innovation. Therefore, the relevant national bodies are advised to remove all legislation that hampers investment by foundations. However, in order to prevent an unwanted accumulation of capital within a foundation, legislators might consider introducing disbursement policies.

Improve the fiscal conditions for foundations supporting R&I

Foundations supporting research and innovation are subject to different fiscal regimes. In most countries, donations to foundations from households and corporations can be deducted from income tax, but thresholds, percentages, amounts and ceilings vary. For example, in Finland it is not possible to deduct a donation to a foundation supporting R&I from income tax, while in Ireland there is no ceiling for deductions above EUR 250. The same differences emerge if we look at corporate tax. It would be advisable to explore the most effective fiscal treatment that stimulates donations to foundations supporting R&I.

However, a more important gain would be to reconsider the tax treatment of economic activities, as this would lead to more investment in research and innovation. Most EU countries only allow a tax exemption on income from trading activity that is related to a public benefit purpose. Other trading income which does not further a public benefit purpose is taxed at the standard corporate income tax rate. A few countries allow income from non-public benefit purposes trading up to a certain threshold, for example Germany, the Netherlands, Spain and the UK.

Together with removing the barriers that prevent R&I foundations from investing in non-purpose related activities, this system enables foundations to get a higher return on investment. In this way, foundations can become vehicles for investing in research and innovation more effectively.

Recommendation 5: Integrate philanthropy as a part of the EU welfare state paradigm

This recommendation is particularly addressed to EU policymakers, EU politicians and national politicians. In many countries R&I is often perceived as a remit of the government. A 'change of culture' is necessary in universities, research institutes and national governments to integrate philanthropy in the public domain. Promoting a giving culture will increase funding for foundations. It will also bring about a change of culture in universities and research institutes which are not used to raising funds from philanthropic sources.

Reinvent the European philanthropic tradition by integrating philanthropy in the EU welfare state paradigm

Europe has a long history of philanthropy and charity, stretching back to the early Christian period, through the Middle Ages, all the way to the nineteenth and the early twentieth century, the era of industrialisation, the rise of capitalism and poverty. In his book Philanthropy, Patronage and Civil Society Thomas Adam stresses the European roots of modern philanthropy. He concedes that 'Philanthropy has thus been widely seen as an American invention and as a distinct American approach to modern life', [1] but shows that 'philanthropy is a European, not an American invention'. [2] Philanthropy can thus be considered as one of the constituents of our modern European society. This report shows that foundations play an important and growing role in supporting research and innovation. The abovementioned recommendations indicate that there is still a lot of potential for support from foundations.

In the UK and in The Netherlands national governments have created policy units to meet their respective philanthropy sectors. The UK started the Compact in 1998, followed by the Big Society; in the Netherlands the Covenant was established in 2011. This development in these countries may be analysed as follows: a cultural shift in the welfare state paradigm whereby private efforts were integrated into the public domain, thus leading to the institutional recognition of voluntary, philanthropic contributions. The policy and politics of increasing partnerships became polity.

Philanthropy has been until now an an isolated issue on the EC commissioners' agendas. However, the social market and cohesion target stipulated in the EU 2020 strategy has opened a new window of opportunity. The focus on research and innovation is important, but it captures only a fraction of the growing societal significance of philanthropy. Philanthropy is not just a financial instrument for research and innovation. Foundations and fundraising charities fund important public services. It is an integral part of the resilience of societies and a key ingredient of social cohesion. Finally, by integrating philanthropy into the EU welfare state paradigm, philanthropy may truly live up to its potential as a way to increase economic growth and to create jobs for Europe.

5 Adam, 2004: 3

2 Oc. p. 5

Annex

Annex
I List of national experts

Austria	Hanna Schneider Reinhard Millner Michael Meyer	Institute for Nonprofit Management, WU Vienna
Belgium	Virginie Xhauflair Amélie Mernier	HIVA, Research Institute for Work and Society
	Johan Wets Caroline Gijselinckx	HEC Management School - University of Liege
Bulgaria	Stephan Nikolov Albena Nakova Galin Gornev	Institute for the Study of Societies and Knowledge, Sofia
Cyprus	Dionysios Mourelatos	National and Kapodistrian University of Athens
Czech Republic	Miroslav Pospíšil Kateřina Almani Tůmová	Masaryk University, Brno
Denmark	Steen Thomson Thomas Poulsen Christa Børsting	Center for Corporate Governance, Copenhagen Business School
Estonia	Ülle Lepp	Independent researcher
Finland	Kjell Herberts Paavo Hohti	Åbo Akademi University Council of Finnish Foundations
France	Edith Bruder	CERPHI
Germany	Helmut Anheier Volker Then Tobias Vahlpahl Georg Mildenberger Janina Mangold Martin Hölz	CSI *Heidelberg*
	Benjamin Bitschi	ZEW Mannheim
Greece	Dionysios Mourelatos	National and Kapodistrian University of Athens
Hungary	Éva Kuti	Association for Nonprofit and Social Studies
Ireland	Gemma Donnelly-Cox Sheila Cannon Jackie Harrison	Centre for Nonprofit Management, School of Business, Trinity College Dublin
Italy	Giuliana Gemelli Maria Alice Brusa	DISCI - Department of History, University of Bologna
Latvia	Zinta Miezaine	Independent researcher
Lithuania	Birutė Jatautaitė Eglė Vaidelytė	Civic Responsibility Foundation Kaunas University of Technology
Luxembourg	Diane Wolter	Banque de Luxembourg

Malta	Richard Muscat	University of Malta
Netherlands	Barry Hoolwerf Danique Karamat Ali Barbara Gouwenberg	VU University Amsterdam
Norway	Karl Henrik Sivesind	Institute for Social Research
Poland	Jan Jakub Wygnański	Unit for Social Innovation and Research SHIPYARD
Portugal	Raquel Campos Franco	School of Economics and Management, Catholic University of Portugal
Romania	Tincuta Apateanu	Independent researcher
Slovak Republic	Boris Strečanský	Center for Philanthropy n.o.
Slovenia	Edvard Kobal	Slovenian Science Foundation
Spain	Marta Rey-García Luis-Ignacio Álvarez-González	University of A Coruña University of Oviedo
Sweden	Stefan Einarsson Filip Wijkström	Stockholm School of Economics
Switzerland	Georg von Schnurbein Tizian Fritz	University of Basel
United Kingdom	Cathy Pharoah Meta Zimmick	Centre for Charitable Giving and Philanthropy, Cass Business School, City University Centre for Charitable Giving and Philanthropy, Cass Business School; Practical Wisdom R2Z.

Annex
II Methodology

Introduction

The aim of the EUFORI Study is to quantify and assess foundations' financial support and policies for research and innovation in the EU, to make a comparative analysis between the EU Member States, and to identify trends and the potential for future development in this sector .

In order to achieve the objectives of the EUFORI Study the research project consisted of the following stages :

Building a network of national experts

The EUFORI Study was carried out by a network of researchers, foundation officers and scholars from 29 European countries. Most researchers are members of the European Research Network on Philanthropy (ERNOP). ERNOP was founded in January 2008 by collaborating philanthropy researchers in order to advance, coordinate and promote excellence in philanthropic research in Europe. Currently almost 150 researchers in more than twenty European countries have joined ERNOP .

Identification R&I foundations in Europe

An important goal of the EUFORI Study is to identify and build a comprehensive contact database of foundations supporting research and innovation in all the Member States. Following the strategy suggested in the FOREMAP study, the EUFORI Study used data from existing registers and snowball sampling to build a comprehensive contact database of foundations supporting research and innovation.

National survey among the identified foundations

In order to assess the foundations' financial support and policies for research and innovation, data collection has been carried out among the identified foundations in each country by means of an online survey. The survey questions were structured along the following topics: types of foundations, sources of income, assets, expenditure on research and innovation, types of support, focus of support, geographical dimensions of activities, foundations' operations and practices, and the role of foundations in the area of R&I.

Interviews with foundation professionals

To contextualise the findings from the quantitative study, additional interviews with foundation professionals were crucial to gain a more in-depth understanding of the foundations' activities and their impact in the research/innovation arena.

Concrete examples of innovative practices

The identification of innovative and successful examples of research and/or innovation projects with a major impact in the field enables the sharing of best practice between Member States. Innovative examples will enrich and illustrate the findings from the survey.

1 Scope of the Study

The EUFORI Study's methodology builds on the FOREMAP Study[1], refining its methodology, extending the number of countries covered and conducting a comparative analysis. The differences within the European Union, among the foundation sector, required a methodology that would be able to generate comparative results, while at the same time allowing for some flexibility in application. The most important lesson learned from the FOREMAP study was that definitions only serve as a reference.

Defining a foundation

There is no common legal definition of a foundation across the EU as definitions vary considerably in national laws. The term 'foundation' in Europe can have different meanings due to diverse cultures, historical contexts and legal/fiscal frameworks. Nevertheless, across the foundations in Europe there is a general understanding of what public benefit foundations are, as illustrated by a couple of common key features. For the purpose of this study the following functional definition, articulated by the European Foundation Center and its members, has been used:[2]

'Independent, separately-constituted non-profit bodies with their own established and reliable source of income, usually but not exclusively, from an endowment, and their own governing board. They distribute their financial resources for educational, cultural, religious, social or other public benefit purposes, either by supporting associations, charities, educational institutions or individuals, or by operating their own programs'.

In order to get a clearer understanding of the foundations eligible for inclusion in the study, several elements of the abovementioned definition will be clarified: public benefit purpose, independent organisation and endowment.

a) Public benefit purposes versus private purposes

All the Member States require that a foundation is dedicated to a specific purpose[3]. However, there are differences between the Member States with regard to the nature of that purpose. In most Member States foundations are only legally permitted to pursue 'public benefit purposes', which is the so-called 'public benefit foundation'. Apart from the public benefit foundation, some Member States also accept

1 EFC, Understanding European Research foundations. Findings from the FOREMAP project. European Foundation Centre, 2009.

2 European Foundation Centre 2007. Foundations' legal and fiscal environments. Mapping the European Union of 27. Brussels: European Foundation Centre..

3 See p. 52-62: Feasibility study on a European Foundation Statute: http://ec.europe.eu/internal_market/company/docs/eufoundation/feasibilitystudy_en.pdf

other types of foundations pursuing other (private) purposes. Several Member States accept, for example, the 'family foundation', which is a foundation for promoting the benefit of members of the family of the founder, or the 'enterprise purpose' foundation, which is a foundation with the purpose of preserving and maintaining the enterprise. It should be emphasised that foundations established for the sole private purpose of supporting family members of the founder or preserving or maintaining an enterprise are excluded from the study. However, foundations with hybrid purposes, having both a public benefit purpose (research and innovation) and a private purpose, are included in the study.

b) Independent organisation

A second important aspect of the definition of a foundation is the reference to an 'independent organisation'. A foundation is a separately-constituted and self-governing organisation, which can be defined as:

Separately-constituted:

'Foundations are institutionally separate from government and are "non-governmental" in the sense of being structurally separate from public agencies. In some Member States foundations can be created and set up by government, can receive significant government support and can even have government officials sit on their boards. However, foundations do not exercise governmental authority and are outside direct majoritarian control'. [1] (Anheier, 2001: 41-42).

Self-governing:

'Foundations are equipped to control their own activities. Some foundations are tightly controlled either by governmental agencies or corporations, and function as parts of these institutions, even though they are structurally separate. Self-governance implies that foundations must have their own internal governance procedures, enjoy a meaningful degree of autonomy, and have a separate set of accounts in the sense that assets, expenditures and other disbursements must not be part of either governmental or corporate balance sheets' (Anheier, 2001: 42).

Private law versus public law

When the government acts as a founder or funder of the foundation, in some countries it may set up either a public law foundation or a private law foundation [2]. If the foundation is established under public law, it will be considered as being part of the State's administration (public law foundation). However, under private law, governments are able to establish foundations outside the direct state administration (private law foundation).

In order to differentiate between the complex public-private boundary and to clarify which foundations are eligible for inclusion in the study, we refer to the 'Spanish case'.

1 Anheier, H.K. (2001) Foundations in Europe: a comparative perspective. In: Schlüter, A., Then, V. and Walkenhorst, P. (eds). Foundations in Europe. London: Directory of Social Change.

2 Garcia-Andrade, J. (2001) Establishment, Amendment and liquidation of foundations. In: Schlüter, A., Then, V. and Walkenhorst, P. (eds). Foundations in Europe. London: Directory of Social Change (627-660).

Publicly founded and/or controlled and/or funded foundations are prevalent in Spain. Moreover, their prevalence is particularly prominent among R&D foundations, as the foundation formula is typically used to articulate public-private collaboration in this area. In their research project on the Spanish foundation sector, Rey and Alvarez (2011) [1] decided to *exclude* publicly founded and/or controlled and/or funded foundations, established under *public law*. As these foundations are subject to the same legal regime applicable to the public administration in their ordinary operations, they considered these foundations to be not truly independently governed (which is in fact one of the key defining features of a foundation). They are rather similar to any public administrative unit. Therefore, in the Spanish study, only publicly founded and/or controlled and/or funded foundations, subject to *private law*, were *included* in the study.

For the purpose of this study we suggested to use this criterion (the distinction between private and public law) in order to decide whether a publicly founded and/or controlled and/or funded foundation is able to operate as an independent organisation. Due to different legislations, this (legal) criterion cannot be applied to all Member States. Therefore it should be emphasised that foundations founded by the public sector or receiving a significant proportion of their income from the government are included in the study as long as they operate as an independent organisation and have freedom (i.e. no political interference in decision-making) in the allocation of funds to R&I purposes.

With any comparative definition some problems remain at the 'edges', and in what could be called 'grey zones', especially where foundations become instruments of the State (Anheier 2001: 47). It was the task of the national experts to identify the 'grey zones' in their country and to discuss with the VU-team whether these foundations should be included in the study or not.

c) Endowment

A third important element of the definition of a foundation is 'that the founder usually provided an endowment'. The foundations eligible for inclusion in this study have *an established and reliable source of income, usually but not exclusively, from an endowment.*

Not all Member States require any founding assets. However, in these Member States the foundation is also usually believed to have an endowment sooner or later. Foundations with no or small endowments and which are primarily active in raising funds are included in the study. For example:

- Foundations in Eastern Europe with no or small endowments and which are primarily active in raising funds as they are still in the process of building assets. These foundations should be included in the study as these foundations are very typical for Eastern European countries with a relatively young foundation sector.

- Health fundraising foundations (like the Dutch Cancer Society in the Netherlands) which support research funded by donations from large numbers of small donations from indi

1 Rey Garcia, M.R. and Alvarez Gonzalez, L.I. (2011) Foundations and social economy: conceptual approaches and socio-economic relevance. CIRIEC España

- viduals. Most of the time these foundations have built up an endowment for future expenditure; however, their main source of income is fundraising. These types of fundraising foundations should be included in the study as they make an important contribution to research and innovation purposes in the EU.

Defining research and innovation

Research

For the purpose of this study research includes basic and/or applied research projects or programs covering all the aspects of science, technology and innovation, from social science, the humanities, philosophy, engineering and technology, to natural science, mathematics, agricultural science, and medical science (including clinical trials phases 1, 2 and 3) and pharmacology.

Foundations supporting research-related activities are also covered. These include support for projects/programs on researcher mobility, knowledge transfer (including intellectual property rights/patents), infrastructure (laboratories, research centres, pilot or demo plants), the dissemination of research (seminars, conferences, etc) and science communication (museums and science parks).

Research versus education

Support for PhD programs and scholarships is included in the study. However, stipends for students below PhD level are excluded from the study as this is support for 'education'.

Innovation

The definition of 'innovation' used in the EUFORI Study is based on the definition of the Innovation Union: 'The introduction to the market of a new product, methodology, service and/or technology or a combination of these aspects'. Examples of innovation with a public benefit are: green energy sources such as wind turbines and solar panels, and new services such as e-health.

Private benefit purposes in the area of innovation are excluded from the study. Not included are, for example, small and medium enterprises which spend money on product development in their own companies and present this as support for innovation, or banks with foundations which give money to develop financial products and present this as innovation.

R&I foundations versus foundations partly supporting R&I

This study primarily focuses on R&I foundations, which means foundations whose primary objective is to support R&I. Secondly, this study focuses on foundations that partly support R&I. Foundations that are active in the area of health or in social, economic and political areas are eligible when a significant aspect of their budget is focused on research and innovation. We realise that 'significant' is a subjective criterion. We would like to emphasise that it is important that these foundations support or operate research and innovation on a structural basis, which means that the support of R&I is part of their (grantmaking) policy.

R&I in and outside the EU

This study is concerned with European-based foundations. There should be a clear European link in the spending of money on research and innovation. This study primarily focuses on the activities inside the European Union. Additionally, it would also be interesting to map out the international R&I activities initiated by European-based foundations.

2 Identification of foundations supporting research and/or innovation

An important goal of the EUFORI Study is to identify and build a comprehensive contact database of foundations supporting research and innovation in all the Member States. Due to a lack of systemised and exhaustive data on foundations in many countries the total number of foundations active in the area of research and innovation in Europe is unknown.

Following the strategy suggested in the FOREMAP study, the EUFORI Study used data from existing registers/databases and snowball sampling to build a comprehensive contact database of foundations supporting research and innovation. The snowball sample was carried out using three strategies. First, the foundations were identified by asking a leading foundation in the field of R&I about other foundations active in that field. In turn, these other foundations were asked to identify yet others. Second, the foundations were identified by asking associations of foundations about their members and other foundations. This strategy was complemented by asking recipients of foundation grants (notably HEIs) about other foundations that they knew about. Other methods the national experts used to create a list of foundations were: making use of the databases of the EFC (European Foundation Centre) and making use of the data gathered in FOREMAP. In addition, existing national surveys on foundations were also used.

From January-April 2013 the national experts worked on the development of a list with contact details of foundations supporting R&I in their country. It turned out that the identification of foundations supporting R&I in Europe was a challenging one. Even in countries with a register or database it was still not easy to create lists, as the databases are not always up to date. The national experts identified more than 12 000 foundations which potentially support R&I. We deliberately say 'potentially' as the sample might be distorted by the inclusion of non-existing, non-active foundations, as well as foundations from which it was not completely clear in advance whether they support research and innovation.

3 The quantitative part of study: the online survey

In order to assess the foundations' financial support and policies for research and innovation, the data collection was carried out among the identified foundations in each country by means of an online survey.

The questionnaire

The survey questions were structured according to the following topics: types of foundations, income sources, assets, expenditure on research and innovation, types of support, focus of support, geographical dimensions of activities, foundations' operations and practices, and the role of foundations in the area

of R&I. [1] Following the lessons learned from the FOREMAP study, the questionnaire included almost exclusively closed questions. Several questions, however, aimed to ask respondents to give the names of foundations and to identify innovative practices. These questions were asked in an open format.

Given the wide range of languages used in the 27 EU countries (plus Norway and Switzerland), the VU team aimed to tackle potential language problems by translating the questionnaire into the national language(s). The availability of the questionnaire in the local language was expected to increase the response rate. National experts were also asked to translate an invitation letter to participate in the survey in the local language.

For the survey data collection an online tool was used, the Qualtrics package. This online survey package facilitates data gathering and data analysis, making the process quicker and simpler for respondents. In order to facilitate the respondents in answering the questionnaire, they were also given the opportunity to complete a paper questionnaire in their national language.

Data collection

The total period for the data collection covered approximately eight months, starting in April 2013 and ending in late November 2013. The VU project team developed a customised strategy for data collection in the different countries. Depending on the national context, national experts were asked to deliver a letter of endorsement from a national well-known and trusted institute or individual. Also, the European Foundation Centre was asked to write a recommendation letter addressed to the respondents participating in the study. Both letters had the aim of increasing the response rate. In order to respond to the questions from the respondents, the national experts functioned as contact persons. The foundation representatives were invited to participate in the study by email or post in case the national experts were not able to retrieve the email addresses of the foundations. The national experts were asked to send the selected foundations a short announcement by email one week in advance.

In order to raise the response rate, different steps were undertaken. First the coordinating team sent, in close cooperation with the national experts, multiple online (e-mails) and offline (letters asking to respond to the online invitation) reminders. Subsequently, the national experts made telephone calls to the non-responding foundations, encouraging them to participate. In a final effort to reduce the non-response rate, the respondents were given a final option to fill in a shortened version of the questionnaire. This shortened questionnaire focused on the most important questions, which were mainly questions about the financial aspects of the foundations. In order to get a complete picture of the R&I foundation landscape in Europe as possible, the national experts were asked to make sure that the most important R&I foundations in their country were covered in the study.

1 The full questionnaire can be found on the website.

In case of item non-response (foundations that did not answer one or several important questions) researchers were advised where possible either to go back to the foundation or to search for the information in other sources (publicly accessible data, annual reports, websites etc.). This mainly applied to financial statistics such as total income, total assets, total expenditure and expenditure on R&I.

Data cleaning and quality control

After the data collection period was finalised, the survey data could be downloaded. Before the results could be analysed, the data had to be cleaned, and the quality of the data was controlled. The data were thoroughly checked and erroneous responses such as duplicate cases, empty cases and test cases were removed. The reference numbers of the foundations were checked for errors and corrected where possible. The variables in the data were recoded and missing values were assigned. As a final step, the data were filtered in terms of support for R&I. Foundations that did not support R&I and had not done so in the previous five years were excluded from the data. The quantitative analysis was based on 1 591 foundations in the final dataset.

Response overview

In the table below a response overview is presented of the data collection according to country. The second column includes the number of foundations for each country that received an invitation to the survey. The third column depicts the number of foundations that responded to the survey. The fourth column shows the percentage of foundations that responded to the survey, and was calculated by dividing the number of responses from the third column by the number of foundations in the second column. It should be noted that the sample of foundations that received an invitation to the survey differed from country to country depending on the existing sources available to the national experts. This implies that we should be very careful with comparing the percentages mentioned in the fourth column, as they do not take into account the differences between the country samples. The final column includes the number of foundations according to country that indicated support for research and innovation. Compared to the responses in the third column, this illustrates that in some countries the sample/responses included more R&I foundations than in other countries.

Table 1: Response overview

	Country	Number of potential R&I foundations invited to the study	Response	% foundations that responded to the survey	Number of foundations that indicated to support R&I (Q1)
1	Austria	297	109	37 %	64
2	Belgium	1 073	72	7 %	38
3	Bulgaria	18	13	72 %	10
4	Cyprus	99	30	30 %	7
5	Czech Republic	519	90	17 %	59
6	Denmark	39	26	67 %	22
7	Estonia	84	40	48 %	24
8	Finland	233	72	31 %	69
9	France	200	27	14 %	25
10	Germany	4 425	228	5 %	152
11	Greece	300	10	3 %	6
12	Hungary	438	295	67 %	253
13	Ireland	53	16	30 %	14
14	Italy	122	44	36 %	40
15	Latvia	38	13	34 %	10
16	Lithuania	6	5	83 %	4
17	Luxembourg	19	14	74 %	9
18	Malta	150	37	25 %	9
19	Netherlands	100	53	53 %	48
20	Norway	903	128	14 %	102
21	Poland	604	67	11 %	37
22	Portugal	88	27	31 %	19
23	Romania	13	10	77 %	8
24	Slovakia	70	17	24 %	11
25	Slovenia	17	2	12 %	2
26	Spain	523	229	44 %	208
27	Sweden	224	91	41 %	87
28	Switzerland	1 992	295	15 %	195
29	United Kingdom	269	59	22 %	59
	Total	12 914	2 119	16 %	1 591

4 The qualitative part of the study/ interviews

In order to gain a more in-depth understanding of the foundations' activities and their impact in the research/innovation arena, interviews were conducted with the foundations' professionals and stakeholders during the period November 2013-March 2014. The purpose of the interviews was to contextualise the findings from the online survey and to identify innovative examples and best practices.

To structure the selection of the foundations, the national experts were given guidelines for selecting foundations for the qualitative part of the study. In general, the selection of the foundations was based on different characteristic types of foundations, different sizes, research areas and/or other relevant features derived from the online survey, as well as best practices/innovative examples. As the national context differs from country to country, the national experts were advised to complement these criteria if it provided additional information, thereby improving the understanding of the role of foundations in the research arena.

Depending on the diversity and size of the foundation sector in each country, 5-10 interviews were carried out with the foundation representatives. National experts unable to select a relevant number of foundation representatives opted to interview the relevant stakeholders in the foundation sector (e.g. policy makers, government representatives, foundation recipients).

The national experts were provided with a general topic list for the interviews which was mainly based on the questions formulated in the FOREMAP project. These topics focused on the reasons, ideas and mo

tives behind several areas (the role of foundations, the role of the EU, reasons for fluctuations in expenditure etc.), which were appropriate for the in-depth interviews. The national experts were free to complement the list with (context-related) questions and topics that would provide additional information, thus improving the understanding of the role of foundations in the field of research.

In order to monitor the selection of foundations and the topics to be discussed during the interviews, the national experts provided a work plan describing their planning, strategy for selecting foundations, the underlying motives for selecting foundations, their names and a short description of the foundations concerned, as well as a preliminary topic list. These work plans were revised by the coordinating team at VU University and provided with feedback.

All the interviews were carried out and transcribed into the native language of the respondents. In order to verify the collection of the qualitative data, the national experts summarised the transcribed interviews into English and sent this summary to the coordinating team at VU University.

In order to further supplement the national reports with examples of innovative projects, success stories or exemplary narratives about foundations supporting research and innovation, qualitative data were also collected through using secondary sources (e.g., online searches, annual reports, journal and newspaper articles).

Annex
III Theoretical model

The analyses in this chapter are based on a theoretical model of foundation activity (see Figure A3.1). We discuss the six groups of characteristics in Figure A3.1 one by one. First let us review the order of the groups. The country characteristics in Figure A3.1 have been placed in blocks in their assumed order and the direction of causal influence. *Economic and political conditions* are relatively stable general characteristics of countries, and are therefore placed in the top left corner. The *foundation model* of a country is another relatively stable general country characteristic. They will influence foundation activity directly, as well as through the other characteristics shown in Figure A3.1. There is likely to be a correlation between the political and economic conditions and foundation models, although not necessarily a causal one. The *legal conditions* and requirements for foundations are more specific characteristics that are likely to have a more proximate influence on foundation activity. In addition, *R&D investments* by government and corporate enterprise and the overall performance in innovation are likely to have a direct influence on foundation activity.

Foundation activity

Now we proceed to a more detailed discussion of the groups of characteristics in Figure A3.1. On the right-hand side of Figure A3.1 we see our main dependent variables, which we have labeled 'R&I foundation activity'.

Economic and political conditions

Foundations are sometimes described as 'the most free' of all philanthropic enterprises. Whether or not this description is true is not relevant here, but it suggests that a country's civil liberties are an important condition that facilitates foundation activity. Foundations depend on the freedom of economic enterprise and the protection of accumulated wealth and assets. A testable hypothesis is that *foundation activity is higher in countries where civil liberties are stronger*. In countries with more political freedom, with a longer tradition of democracy and with more economic freedom we expect to find more active R&I foundations.

In addition to economic and political freedom, the availability of wealth and assets in a country is also an important condition that facilitates the activity of foundations. Foundations are built upon wealth. The hypothesis is that *countries with a higher level of GDP show higher levels of R&I foundation activity.*

Not only is the simple availability of wealth important for foundation activity, but also its distribution. Throughout history, foundations in Europe have been established primarily by members of the elite: by entrepreneurs, the nobility and members of the upper class. The hypothesis based on this insight is that *countries with a higher level of income inequality show higher levels of R&I foundation activity.*

The philanthropic culture

While some countries in Europe have a long and rich history of philanthropy, other countries have less of a tradition in philanthropy and have only recently experienced growth in terms of philanthropic initiatives. Research on philanthropic activity by individual citizens shows that differences between countries are relatively stable over time (CAF, 2013). Shepherd, O'Carroll and Ferguson (2014) found that countries with an opt-in system for postmortem organ donation have higher rates of charitable giving. We see the level of philanthropic activity by citizens and the organisation of the organ donation system as an indicator of the societal importance and culture of philanthropy. The hypothesis is that *countries in which organ donation is organised through an opt-in system and where a higher proportion of the population supports charities with donations show higher levels of foundation activity.*

Legal conditions

The general level of freedom in society is expressed in its laws. Also, the philanthropic culture of a society can be recognised in the legal framework for foundations. As a result, European countries' laws differ in the treatment and regulation of foundations. Countries differ in terms of the generosity of facilities for foundations (tax exempt status, deductibility of donations) as well as in the strictness of registration and regulation of foundations (EFC, 2011). High scores in these aspects do not necessarily coincide. Two testable hypotheses are that *countries with more generous fiscal treatment and less strict legal requirements show higher levels of foundation activity.*

R&D investments

In addition to foundations, governments and corporations also spend money on research and development. The extent to which government activity draws in or crowds out private investment has been the subject of much debate in the literature on philanthropy. As far as we know, no scholarly attention has been devoted to this question specifically with regard to foundations thus far. The findings in the research on the relationship between government funding and private philanthropy are very diverse (De Wit and Bekkers, 2014). It is possible that higher government and corporate investment in research and development go alongside more R&I foundation activity ('crowding-in'), but it is also possible that foundations are less active when government and corporate investments are higher ('crowding-out'). As a result, we do not have a clear hypothesis on the relationship between government investment in and foundation expenditure on research and innovation.

Foundation models

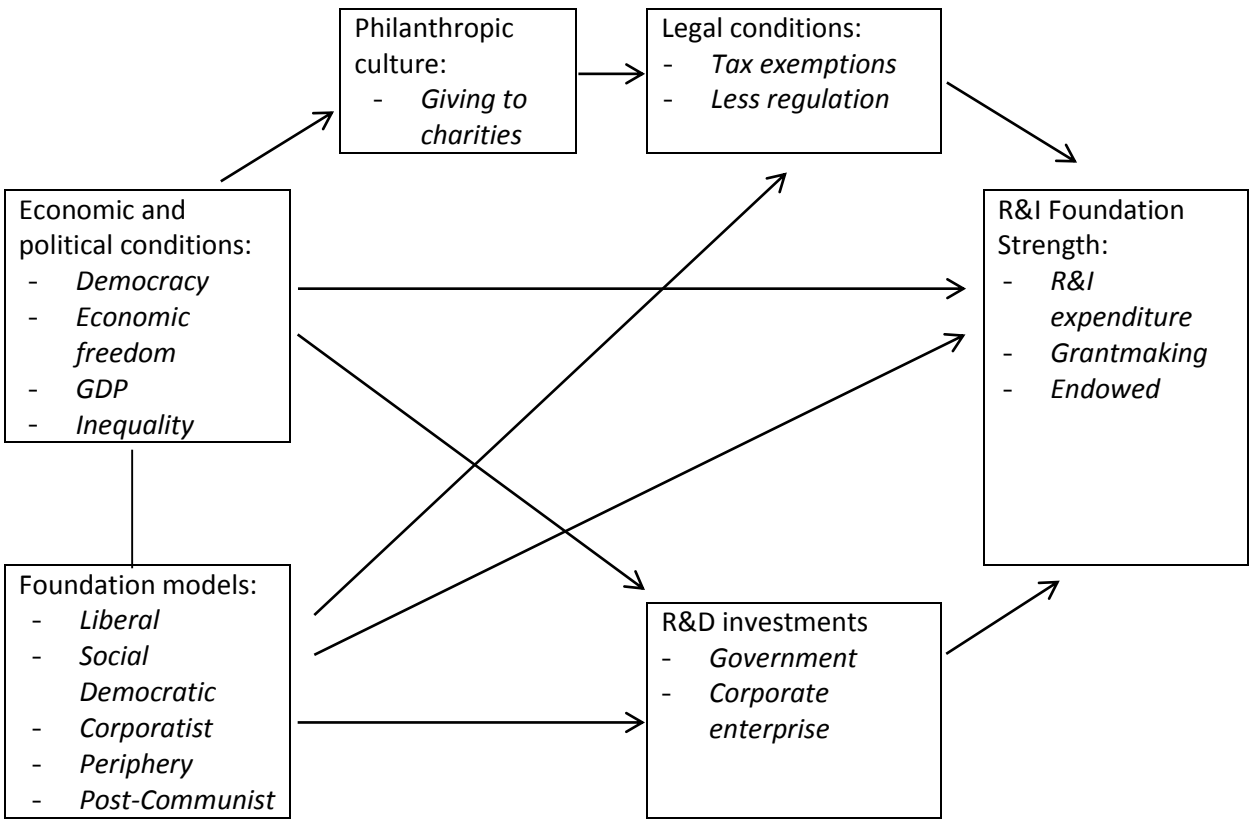
Differences between countries in the activity of foundations were described in seven foundation models by Anheier and Daly (2006a). These foundation models were based on the two-dimensional classification of third-sector regimes (Salamon and Anheier 1998). According to this classification countries scoring low or high in public sector social welfare spending and the economic size of the third sector are correlated. In countries with a statist model, low public sector spending is combined with a small third sector. In the liberal model, low public sector spending is combined with a large third sector. In social democratic countries, high public sector spending is combined with a small third sector. Finally, corporatist countries combine high public sector spending with a large third sector. A subdivision is made between statist models of the

peripheral type and the post-Communist type. According to the corporatist model, civil society-centered, Mediterranean and state-centered categories are distinguished. In the current analysis we grouped all the corporatist countries together in one category.

Because the classification is based on social welfare spending it does not bear directly on research and innovation. We hypothesise that the same patterns hold for research and innovation as for social welfare. One would then expect that countries where foundations play a more important role show more foundation activity in terms of higher income and research and innovation expenditure. Anheier and Daly (2006a) described the overall importance of foundations as high in countries with a liberal and social democratic model. In countries with a post-Communist model and a Mediterranean and civil society corporatist model the importance of foundations is thought to be medium. The importance of foundations is described as low in the peripheral statist and state-centered corporatist model.

Previous research suggests that foundation models are not straightforwardly associated with differences in the roles that foundations see for themselves, such as redistribution, efficiency, social change and pluralism (Prewitt 1999), nor with complementarity, substitution, or innovation (Anheier and Daly 2006b). Countries with different foundation models show strong differences in terms of the types of foundations. In countries with a social democratic or a corporatist model operating foundations play a more important role than in countries with a liberal or statist model. Partnerships with government also differ along these lines.

Figure A3.1: Model of foundation activity



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Annex IV Data and methods used in the comparative analysis

In the comparative analysis context data at the country level were used from the EUFORI survey, the European Foundation Centre (EFC), OECD, Eurostat, the Economist Intelligence Unit, the Heritage Foundation and Gallup (CAF, 2011).

Foundation activity indicators

To measure foundation activity, we used three indicators from the most recent version of the EUFORI data file (1 September 2014). The dataset contained 2 119 observations. We used total foundation R&I expenditure, whether the foundation was grant making and whether the foundation reported income from an endowment.

A first indicator of foundation activity is the level of R&I expenditure for R&I foundations, which enabled them to spend money on research and innovation. In addition to the R&I expenditure we also included two indicators of foundation activity in our analysis, where we expect to see qualitative differences between the foundations: *types of foundations and source of income*. Two commonly distinguished *types of foundations* are grantmaking and operating foundations. grantmaking foundations use their expenditure to provide grants for other organisations, and/or support projects carried out by other organisations; operating foundations use their expenditure to achieve their goals by themselves, by carrying out projects within their own organisation. Different sources of foundations' income entail amongst others: income from an endowment, donations from individuals, income from government and other third parties. Foundations that mainly receive income from an endowment are relatively independent vis a vis foundations that receive income from other sources.

The R&I expenditure variable was logged to reduce the skewness of their distribution. It is a common observation in research on philanthropy that data on amounts are not normally distributed. In the EUFORI data we also find a power distribution such that a relatively small number of very large foundations earn the vast majority of all the foundations' income. A common solution to obtain a more normal distribution is to log-transform the amounts. In the analysis below we used this transformation. The log-normal transformation is applied to all variables representing amounts (such as R&I expenditure, GDP) and levels (such as income inequality).

Legal treatment of foundations

To measure the legal treatment of foundations we used a selection of the assessments of EU countries reported by the EFC (2011). [1] We expected that favourable tax treatment would be correlated with a

1 We thank our research assistant Dave Verkaik for coding these assessments.

higher level of scrutiny applied to foundations, but this was not the case. The number of requirements that tax authorities impose on foundations (indicators 3, 4, 11, 12) is not correlated (r = .012) with the level of the favourable treatment of foundations (indicators 1, 19, 21, 26, 27).

Using a factor analysis, we found three largely independent dimensions among the indicators (see Table A4.1). The first dimension consists of the indicators of state approval, public registers and the number of supervisory bodies. Countries where state approval is required for the establishment of a foundation were less likely to have a public register and more likely to have multiple supervisory bodies. The second dimension consists of tax exemptions, publication requirements, and the admission of the pursuit of private purposes. The third dimension was the level of deductibility of donations to registered public benefit organisations.

A composite 'Legal Treatment' variable was created counting the number of tax facilities for foundations where countries scored positively. This variable is negatively correlated with the scrutiny factor and the tax exemption factor, and positively correlated with the deduction factor.

Table A4.1: Factor analysis of legal treatment of foundations

	Component		
	1	2	3
3. State approval required	.747	.043	.071
4. Public register available	-.678	-.056	-.420
12. Multiple supervision bodies	.730	-.079	-.150
1. Private purposes permitted	.090	-.697	-.014
11. Publication of annual report required	-.024	.774	-.086
19. Automatic tax exemption	.477	.525	-.108
21. Foundations do not pay income tax	.121	.526	.296
26. Maximum deduction for individual tax payers	.104	-.101	.756
27. Maximum deduction for corporate tax payers	-.092	.135	.835
Name	Scrutiny	Exemption	Deduction
Eigenvalue	2.097	1.529	1.453
Percent of variance explained	23.3 %	17.0 %	16.1 %
Correlation with Legal Treatment (LT)	-.163	-.490	.365

We found that legal conditions are not consistently related to foundation activity indicators (see Table A4.2). The overall legal treatment (LT) score is not related to any of the foundation activity indicators. Tax exemptions are more frequent in countries where more operating foundations are present and where fewer foundations receive income from an endowment. Also, we see a weakly positive relationship be

tween the deduction level and foundation strength, mainly because of grant making activity and receiving income from an endowment. R&I expenditure shows a weakly negative correlation with the level of scrutiny.

Table A4.2: Correlations between legal treatment variables and foundation activity indicators

	Foundation Strength Score	R&I expenditure	Grant making	Endowed
Scrutiny	.003	-.120	.016	.049
Exemption	-.145	.037	-.216	-.210
Deduction	.103	.033	.065	.079
Legal treatment	-.001	-.052	.033	.056

Economic and political conditions

From the Heritage Foundation and Dow Jones & Company (Miller et al. 2013) we used indicators for the economic and political conditions that are likely to support the emergence and economic activity of foundations: the Property Rights Index, Freedom from corruption, Business freedom, Monetary freedom, Investment freedom, GDP and GINI (after-tax income inequality). [1] We added the Democracy Index constructed by the Economist Intelligence Unit (2013) and data on income inequality (pre- and aftertax GINI, i.e. income inequality before and after taxes) from the Standardized World Income Inequality Database (SWIID, version 4.0; Solt, 2009). Correlations among these indicators ranged from .08 (between the Democracy Index and income inequality) to .91 (between the Property rights index and Freedom from corruption). In a factor analysis, the first factor had an Eigenvalue of 4.2 and explained 46.5 % of the variance. The second factor had an Eigenvalue of 1.4 and explained an additional 15.7 % of the variance; the third factor had an Eigenvalue of 1.2, explaining an additional 14.0 % of the variance. However, the scree plot clearly suggested that a one-factor solution was the best one. A reliability analysis on the political and economic indicators showed that monetary freedom and after-tax income inequality did not fit the scale; their initial commonalities in the factor analysis were very low (.136 and .187, respectively). Removing these items and forcing a one-factor solution yielded an Eigenvalue of 3.9, explaining 56 % of the variance. Factor scores for the first component were saved as the composite score for Economic and political conditions. The correlations of the composite score with its indicators range from .52 (GDP) to .92 (Freedom from corruption).

1 For several countries the index did not have values for after-tax income inequality. Values for these countries were taken from the World Factbook, https://www.cia.gov/library/publications/the-world-factbook/fields/2172.html.

Table A4.3: Correlations between economic and political conditions and foundation activity indicators

	Foundation Strength Score	R&I expenditure	Grant making	Endowed
Democracy Index	.249	.058	.320	.219
Property Rights Index	.312	.117	.338	.304
Freedom from corruption	.328	.116	.364	.310
Business freedom	.378	.236	.329	.344
Investment freedom	.284	.166	.219	.259
GDP (logged)	.149	.081	.105	.199
Pretax GINI (logged)	.240	.111	.182	.264
Economic and political conditions	.372	.168	.363	.359
Posttax GINI (logged)	-.159	-.043	-.248	-.184
Monetary Freedom	-.012	-.105	.049	.019

Table A4.3 shows that economic and political conditions are moderately correlated with foundation strength. We see positive correlations with grant making activity and receiving income from an endowment but somewhat weaker correlations with R&I expenditure. The pattern of correlations for income inequality after tax (posttax GINI) is different from pre-tax inequality. In more unequal countries after redistribution by the tax system foundations are less likely to be grant making foundations and to receive income from an endowment, while this is not the case for countries with more unequal income distributions before taxes.

R&D investments by government and corporate enterprise

Two important indicators in the Innovation Scoreboard are R&D investments by government and corporate enterprise. In countries with higher investments by government and corporations, the innovation performance is higher. These countries have a higher R&D index and a higher Innovation Scoreboard score. Table A4.4 shows how R&D investments by government and corporate enterprise and the R&D index are related to foundation activity. We find that both government and corporate enterprise investments as well as the R&D index are positively related to foundation strength. The correlations of corporate investments with foundation activity indicators are stronger than with government investments.

Table A4.4: Correlations between philanthropic culture variables and foundation activity indicators

	Foundation Strength Score	R&I expenditure	Grant making	Endowed
Government investments	.095	.100	.027	.136
Corporate enterprise	.249	.116	.215	.291
R&D Index	.302	.051	.356	.316

Philanthropic Culture

The proportion of respondents in the Gallup World Poll (GWP) that reported having made donations to charitable causes in the previous year was used as a measure of the philanthropic culture, as well as the data on the organisation of organ donation procedures. We added information on the organ donation system from Shepherd, O'Carroll and Ferguson (2014) for Cyprus, Estonia, Luxembourg, Malta, Norway, Slovenia and Switzerland to the database by using information from websites of transplant authorities in these countries [1] and a paper by Jansen et al. (2014). As in the Shepherd et al. (2014) paper, we found that the proportion of the population giving to charity is much higher in countries with an opt-in system for organ donation (61.2 %) than in countries with an opt-out system (34.5 %).

Table A4.5 shows that the philanthropic culture indicators are moderately correlated with the foundation strength score. However, this relationship is due mainly to grantmaking activity and receiving income from an endowment, but not to R&I expenditure.

Table A4.5: Correlations between philanthropic culture variables and foundation activity indicators

	Foundation Strength Score	R&I expenditure	Grant making	Endowed
Opt-in organ donation system	.133	-.037	.194	.206
Proportion giving to charities	.252	.018	.256	.314
Philanthropic culture	.176	-.025	.222	.254

Country level variance in foundation activity

We apply hierarchical ('multi-level') regression models, to decompose the variance between individual foundations and between the countries where these foundations were established. In the comparative analysis, we looked for variance at the level of the Member States.

First we examined whether there was any variance at the national level, in addition to the variance between individual foundations. Then we estimated stepwise regression models, entering the indicators in five groups. In each model, all the indicators of one group were included, but not indicators from other groups. Table A4.6 shows the results of these models.

1 Cyprus: http://www.moh.gov.cy/moh/moh.nsf/page90_en/page90_en?OpenDocument;
Estonia: http://www.kliinikum.ee/eng/transplantation-centre;
Luxembourg: http://luxembourg.angloinfo.com/information/healthcare/death-dying/organ-donation/;
Malta: http://www.transplantsupport.com.mt/page/100/questions-and-answers;
Norway: Jansen et al. (2014).
Slovenia: http://www.slovenija-transplant.si/index.php?id=postanite-darovalec&L=2
Switzerland: Jansen et al. (2014).

Table A4.6: Country level variance in foundation activity

	Foundation Strength Score	R&I spending	Grant making	Endowment
Base line	17.9%	13.8%	30.3%	10.3%
Foundation models	11.3%	6.6%	25.4%	10.1%
Economic and political conditions	13.8%	3.3%	24.1%	11.8%
Philanthropic culture	17.4%	12.9%	28.1%	9.1%
Legal conditions	21.9%	14.5%	30.8%	11.5%
R&D investments	13.2%	7.4%	22.2%	11.4%
Best model (selected indicators)	11.4%	2.3%	17.2%	6.0%

Entries represent intraclass correlations (ρ) estimated in hierarchical regression analyses

We estimated hierarchical regression analyses of foundation activity to answer this question. Table A4.4 shows the results. The first row contains the baseline level of variance in each of the aspects of foundation activity. Each of the following lines presents the proportion of variance at a national level that remains when a group of characteristics is included in the regression analysis.

The entries in the baseline row show that for the total *foundation strength score*, for instance, we see that 18 % of the variance is located at a national level, and for the level of *R&I spending* it is 4%. These values are common for societal phenomena. Whether foundations are grantmaking or operating shows the highest degree of variance between countries: 17 % of the variance in this aspect of foundation activity is located at the national level.

The results in the second row of table A4.6 show that foundation models perform rather well when R&I spending and grant making activities are considered, but not for receiving income from an endowment. Economic and political conditions outperform foundation models in terms of their explanatory power for national level variance in foundation activity when R&I spending levels and the type of foundation are considered.

R&D investments by government and corporate enterprise also explain important proportions of the variance in expenditure to R&I and grant making activity, but not in receiving income from an endowment.

The philanthropic culture explains little of the differences in foundation activity between countries.

Legal conditions show a surprising pattern: controlling for legal conditions increases the variance in foundation activity between countries. It is not clear how this pattern can be explained. In any case the differences in the activities of R&I foundations between countries are not consistently related to the legal treatment of foundations.

Finally, the bottom line of Table A4.6 shows the national level variance in each of the foundation activity indicators that remains in the 'best model' – i.e. the regression analysis of a particular variable that includes a limited set of country characteristics which explains most of the national level variance. The 'best model' is different for each of the indicators, depending on the performance of the country characteristics that explain most of the variance. The fact that the best models differ between variables suggests that there is not a single set of factors that explains why some countries show more foundation activity than others.

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