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Monitoring European Trends in Social Sciences and Humanities

Synthesis Report 2010

The Social Sciences and Humanities are influential for all Member States and for the European Commission. Thousands of researchers carry out research across a vast range of subjects of national and international interest. They do so taking into account the organizational structures, framework conditions, cultural preferences and political priorities in their countries.

METRIS, an initiative of the Directorate-General for Research (DG RTD), aims to become an entry and reference point for the social sciences and humanities in Europe. Commissioned by the Science, Economy and Society Directorate of DG RTD and executed via the Metris-Network, it pursues the collection, regular updating, and analysis of information on social sciences and humanities at national and European level.

METRIS products

All products are brought together on the website www.metrisnet.eu. It provides METRIS country profiles which currently cover 27 countries (EU Member States and other countries associated with the European Union's Research Framework Programme. As they become available, the website provides access to the following services and publications:

- Regularly updated country profiles of SSH systems in 27 countries;
- A news service;
- Annual monitoring reports for all countries covered;
- An annual synthesis report bringing together key points on SSH;
- Links to relevant reports and websites.

The present document has been prepared within the framework of an initiative of the European Commission's Research Directorate-General, Science, Economy and Society Directorate, Unit Horizontal aspects and coordination. The network is managed by the Technopolis Consulting Group.

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The contents and views expressed in this report do not necessarily reflect the opinions of the Member States or the European Commission.

The report is based on information included in the Annual Reports 2010, covering the period from May 2009 to March 2010.

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1. Introduction

1.1 A short overview of monitoring trends in SSH

According to former research commissioner J. Potonik's foreword to the METRIS report published in 2009, the idea of providing a system that would facilitate the development of a European perspective of social sciences and humanities dates back to a major conference on SSH which took place at the end of 2005. Numerous SSH scholars attended and showed a great willingness to actively participate in the European debate. This was rather surprising given the previous tendency of SSH to focus more on local issues rather than on European or worldwide aspects. It was equally welcome, as it seemed to indicate that SSH should become more integrated in the evolving European research Area.

The question of how to initiate such a debate so that it would have some effect at European level had to be addressed. The Framework Programme provides room for numerous researchers to communicate and cooperate across borders and many of these projects tackle issues that are important in several countries. However, to move from individual projects to a more coherent policy, requires a better understanding of each others' systems, problems and priorities.

Similarly, the identification of Europe-wide topics to which SSH could provide insights or that were common issues, would be useful. A first step in this direction was provided by an expert group which identified emerging trends in research in SSH in Europe by analysing the five priorities of theme 8 of FP7 as well as cross-cutting trends. In doing so, the expert group concluded that SSH trends do not only reflect societal developments, but also changes in the research systems. They repeated the plea for the creation of a monitoring programme that would provide an overview of the systems and the basis for understanding the various funding mechanisms, and last but not least would indicate how and with what result the European Research Area trends affected the national systems.

These questions and a number of other were addressed by the METRIS-Network, a group of national experts established at the end of 2008. This provided the first set of national profiles by mid June 2009 and created an online system in order to provide the broadest possible access to interested parties such as researchers, administrators, and policy makers.

Based on the above, the present report aims at synthesising the main structural and singular feature results. Evidently, such a synthesis cannot include all available information which may be of interest to individuals. We therefore encourage the reader to look for further data either at the individual countries sections or at full country profiles on the METRIS website www.metrisnet.eu.

1.2 A diverse history and a common future?

The history of the humanities in Europe dates back often to medieval times, when the first universities were established with faculties for, law, philosophy, mathematics, rhetoric, grammar, physics etc. What we define as social science disciplines today is of much younger origin. Even if the roots of the social sciences can be traced back to ancient philosophy, the modern use and distinction from the *humanities* can be linked to the fathers of sociology – who introduced to the objectives of their studies research methodologies which were more in line with the formalised and quantitative approaches of natural sciences than the positivist approaches that prevailed in several *humanities* fields. By the end of the 19th century, the social sciences embraced a number of established disciplines such as law, education, health and the like.

What were the leading issues dealt with by the humanities and the social sciences at that time? In many countries, linguistics became very important – the foundation of a particular language came about as a result of the nationalist movements of the time,

and was connected to literature and the fine arts. The humanities and social sciences developed further in Europe until World War II. The post-war political division of Europe brought a halt to this development in the Communist countries. The Roumanian METRIS profile may be an extreme example, but some of its features would not seem unfamiliar in many other ex-Communist countries:

"*In the pre-1989 period, … SSH had a very low profile in the educational system of the country. In the 1950s the national education was controlled by the Romanian Communist Party, heavily influenced by the Soviet politics, and education was seen as an important tool to create the "new man". The classical division between technical, classical and vocational schools was completely removed, so that schools provided identical education to everybody, most universities were downgraded to technical institutes, and most SSH were completely suppressed or adapted to the new ideology (sociology was nearly forbidden, psychology, law and philosophy reformed on the basis of Stalinist dogma). A short reversal of politics in the 1960s brought about a liberalization trend that reinstated the traditional structure in education, e.g. classical and vocational high schools, foreign languages, etc. However, that trend was again restricted in the 1970s within a nationalist education reform, which curtailed foreign language studies, lowered the importance of social sciences and introduced a new form of nationalist socialist realism that became the norm in education. Education reforms in the 1970s had a heavy emphasis on technical schools at a ratio of two-thirds technical schools to one-third humanity schools, partly based on the political belief that the study of SSH was a waste of state resources and that intellectuals were not productive members of society like those trained in industry*."

While SSH in western countries were subjected to substantial ideological pressures in the late 1960s, they at least developed further and were not suppressed as was the case in many eastern Member States. In light of this, it should be noted that in many European countries a fresh start in the field of SSH only occurred about 20 years ago. This development is portrayed in most METRIS country profiles for the central-eastern Member States and can be seen in many different facets. For example in terms of graduates: in central and eastern European States, the number of SSH graduates showed the highest growth rates compared to other fields such as natural sciences or engineering and in many countries, the proportion of SSH graduates is still very high. The reason for this can be found in the ending of almost 50 years of suppression and state-directed study planning. In terms of SSH disciplines priorities, many of the central-eastern Member States mention linguistics. The development and active support of the national language – which was suppressed during the Communist regime – is nowadays considered almost everywhere as a national priority and supported by research programmes.

What is noted in the METRIS reports on several central-eastern European States is that after the change "SSH has not immediately reflected all the tremendous changes but has been developing within the known canons of state organised science." Possibly the main contrast between the central-east MS to the EU15 is that "*Despite many turbulences and organisational adjustments to the western-type of science management, the rules and principles of science coordination (…) has not changed much from the previous period. The entire science, as well as SSH are coordinated and financed by the Ministry of Science/ Education (…) according to disciplinary division of science aimed at developing all scientific disciplines at the same footing. The main advantage of this horizontal approach was the successful maintaining of a national research base and its scientific diversity during the period of turbulent changes. On the other hand, the principal shortcoming can be recognised in the shortage of priorities and concerted actions in selected disciplines or themes of national interest. The only slightly preferred scientific field is linguistic research (…).*"

While SSH developed in their national environments – possibly differently in the post-Communist countries than in the EU15 countries, the European Framework Programme started in the mid 1990s to fund SSH research, namely 'targeted socio-economic research' under FP4. Since then, the social sciences rather than the

humanities have been and continue to be covered in the FPs. Given the logic of the FP to foster communication and cooperation among predominantly European researchers, one might expect that the association to the FP of the then Candidate Countries and their inclusion in FP research, would have impacted the SSH domains in the new Member States, and possibly streamlined research trends. Division of work by the competent ministries between policy development and policy implementation, and management by often newly created intermediaries can now be found in almost every country. Given that the research machine is continuing to become much more complex with a more systematic peer-review and ex-post evaluations, the number of institutions dealing with these tasks has also increased. Thus at governance level one may conclude that a mainstreaming process of how research is organised in the EU27 occurred and a dominant design is apparent.

In terms of prioritisation, the EU27 and associated countries are following largely national priorities – if they have them. In several countries, a number of 'priorities' are proclaimed by the competent ministries or sciences councils. But every so often, it seems to be more a wish-list than a binding or limiting choice. In many countries, priorities are not explicitly stated but one may look at the topics of research programmes or core funding areas and see which fields were chosen. In terms of priorities or lack of them, most countries continue to leave researchers the freedom to choose the research themes from the bottom-up. This may be helped by the fact that many countries use a mechanism – the creation of centres of excellence or competences which is not necessarily linked with a pre-defined set of themes. But priorities may evolve or co-evolve.

There is certainly a substantial part of SSH research which will remain local, regional, or national, but the Europeanization of research do also concern the SSH area. There are indeed several socio-economic problems which affect if not all, at least a number of EU countries. This is true for aging populations, migration issues, security etc., fields that deal with individuals, groups, or even societies. These challenges as well as others, which seem to be more 'technology-oriented' like global warming or energy supply are difficult to tackle without including societal insights. The quasi 'de-fragmentation' of research and an increasing interdisciplinarity may help the SSH to obtain a different role and perception. If SSH feels that it is very often left behind the hard sciences in the way it is appreciated (and funded), this can change when social scientists provide insights and prove the usefulness of its funding. The priorities at EU level, the 'grand challenges', but also socio-economic priorities at national level can be better addressed if the know-how of the SSH researchers, their methodologies and insights are used. Thus, a new era may be around the corner.

1.3 Organisation of the report

Given that the METRIS country reports aimed at providing research landscapes and tried equally to provide statistical evidence whenever possible, the report provides in Chapter 2 the available across countries data. Chapter 3 includes a synthesis of mainly two aspects: how is SSH research organised and how is it funded? For the former, a distinction is made between policy formulation and policy implementation which is largely mirroring the present situation in countries. Funding is a complicated issue as funding data is in many cases not available from the funding sectors but only ex-post by the research performers. The descriptions on funding rely very much on nationally available information but in a statistical sense they are non-comparable.

Chapter 4 looks at the internationalisation of SSH and thus makes use of FP participation and funding data which is not within the core of the national METRIS reports but again provide a cross-country analysis. Chapter 5 looks at commonalities and diversity – expressed by priorities, programmes and also evaluation habits. We then look into materialised priorities - research programmes- and at the question of whether or not they follow a national interest, are internationally inspired, or there is even room for joint programming.

The report ends with a short outlook section in Chapter 6.

2. The knowledge-base of the social sciences and humanities in national research systems

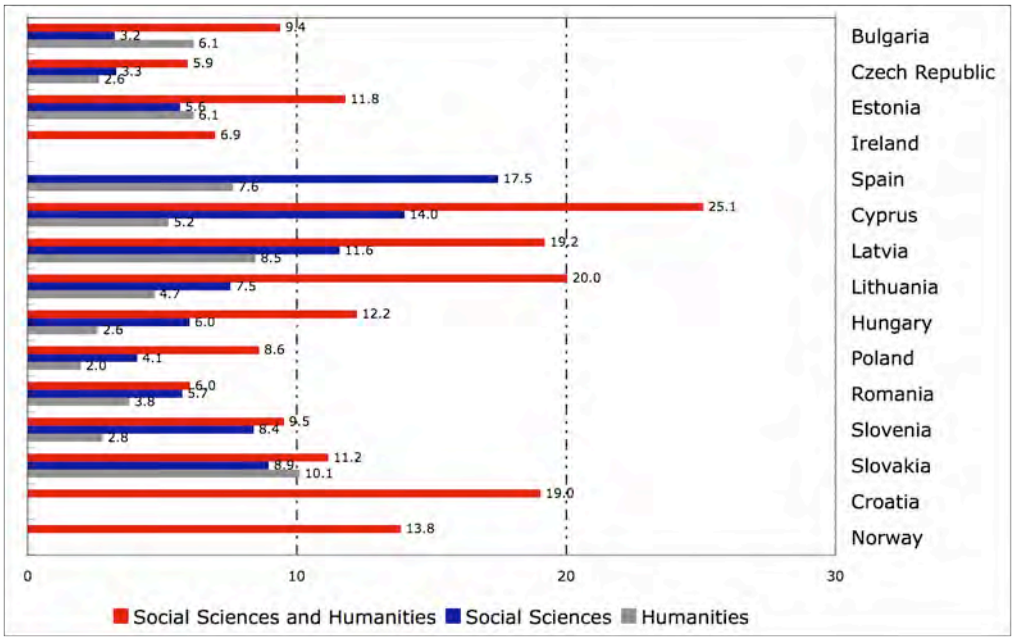
While policy makers, scholars and other stakeholders are keen to stress the overall importance of the social sciences and humanities, one may look at indicators which may enlighten us on the importance of the field. 'How much money is put into SSH' and 'how many researchers are dealing with SSH' are valid questions if we want to know more about the scope of the field. The main difficulty is the fact that a breakdown by field of science is very often not provided by the national Statistical Offices. There are several reasons for this, but the two most powerful are that either the data is not collected, or the national collection methods do not comply with international standards and thus the data is not published via Eurostat.

The following graphs and tables are the results of the attempt to collect and analyse available specific data on the social sciences and humanities. This is the case for the overall shares of SSH in all R&D expenditure, budget appropriations for R&D, the sectors of performance, the number of researchers and graduates, occupation mismatch and unemployment of SSH graduates, and scientific publications. FP participation will be analysed in Chapter 4 which deals with internationalisation.

While it is of course a part of the overall R&D statistics, not too many countries provide data broken down by fields of science. Many of the new Member States do provide specific data and some of the old ones do so as well. But there is no consistency: while country A may provide the number of SSH researchers, it does not necessarily also provide the amounts spent while for country B, the opposite may be true. Thus, using the available data only provides a very partial picture – though it can also alert policy makers and help pressure for better data collection. The non-availability of core indicators is a particular problem for the larger Member States such as France and the UK. Both are not only large countries but their educational data as well as their performance in terms of publications or participation rates under the EU Framework programmes in SSH suggest that these countries do provide substantial amounts for SSH research. Therefore, the available data does often provide a rather incomplete picture about the knowledge stock within Europe – but it can provide a certain flavour for trends. In Chapter 3.2 financial data included in the METRIS country profiles and provided via national sources will be analysed.

Given this caveat, the following data on the **share of social sciences and humanities in gross domestic expenditures for R&D** (GERD) in millions PPS at 2000 prices suggests, that overall, not that much is spent on SSH. GERD on SSH is only available for 15 European countries which spend between 5-25% of all their GERD on SSH (Exhibit 1). The highest shares can be found in Cyprus and Spain with 25%, followed by Lithuania with 20%, and 19% in Latvia and Croatia. The lowest share can be found in the Czech Republic (5.9%) and Romania (6%). One can note that the humanities have a higher share than the social sciences in a few countries, namely Bulgaria, Estonia, and Slovakia. For the other countries, social sciences dominate.

Exhibit 1 Shares of SSH in GERD, 2007 (1), millions of PPS at 2000 prices

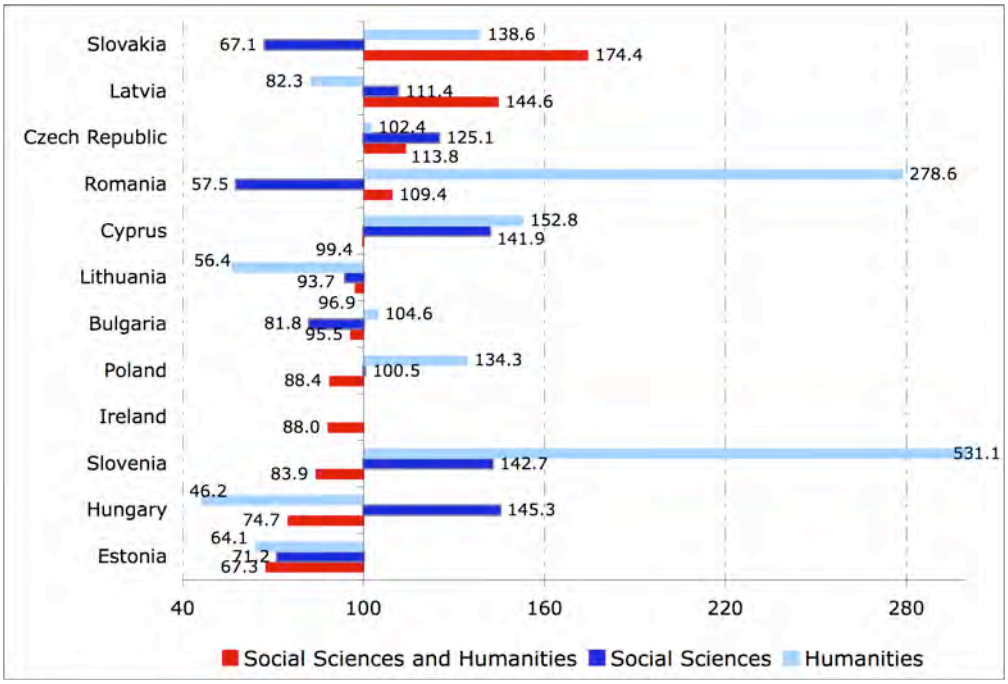


Data: Eurostat
Calculations: Technopolis Group
Note: (1) IE: 2006,

Between 2002-2007 a considerable decline in terms of SSH funding can be observed in several countries, while in other countries there is a net growth (Exhibit 2): between 2002 and 2007 a decline can be seen in Estonia (33%), Hungary (25%), and Slovenia (16%), while it increased considerably in Slovakia (74%) and Latvia (44%). Interestingly in Slovenia the share of Humanities in GERD has multiplied by a factor 5 since 2002 (from €6m to €22m in absolute value) even if the overall share of SSH in GERD decreased.

The data situation is better when looking at the sectors of performance. Exhibit 3 shows the **shares of SSH performed by various sectors**. SSH represents an important share of the expenditures of the higher education sector for R&D (HERD) in 2007, ranging from a minimum of 5% in Romania and going up to 48% in Malta; for most of the countries, this share is around 25%. GOVERD is also important indicating that SSH research is also performed in public research organisations. The government is an important performer of SSH research in Malta (48% of GOVERD), Austria (33%), Estonia (34%), Denmark or Croatia (30%). The absence of the business sector is quite interesting. This sector is a noteworthy contributor to SSH research only in Latvia (22% of BERD) and in Portugal (14%), and to a smaller extent in Cyprus (6%) and Turkey (5%). All other countries either do not report business activities in SSH research or they may be too minor. The private-non-profit sector is present in more countries than the business sector. In Croatia, SSH is the only domain where the private non-profit sector was performing R&D in 2007. The share of the sector is also relatively high in the Czech Republic (72%), Poland (46%) and Estonia (32%), again indicating that a considerable share of the activities of this sector is in SSH.

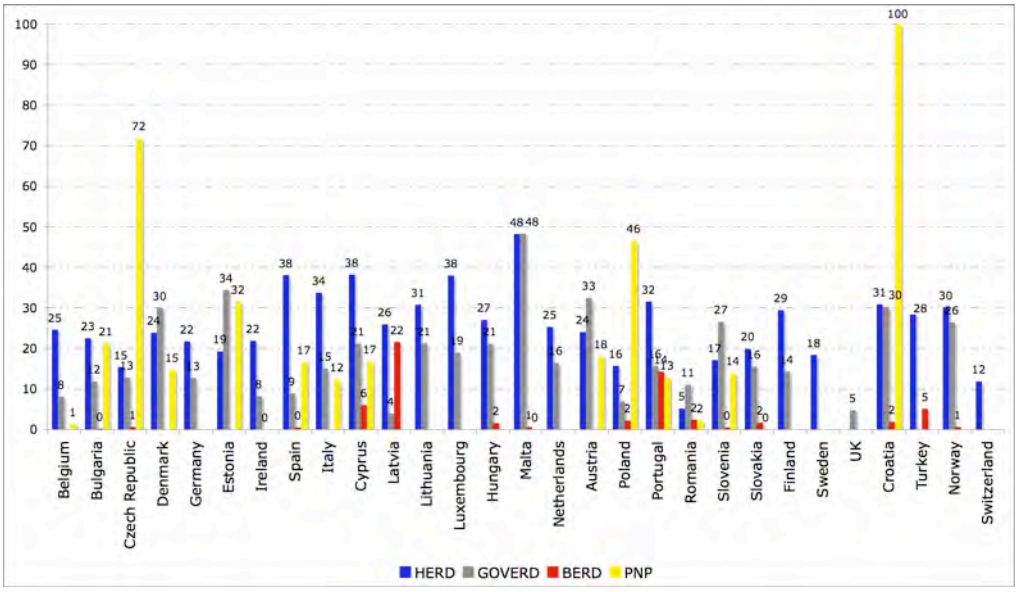
Exhibit 2 Shares of SSH in GERD 2007 (index 100=2002) (1)



Data: Eurostat,
Calculations: Technopolis Group
Notes: (1) IE: 2006 data; ES: SSH data for 2002 only

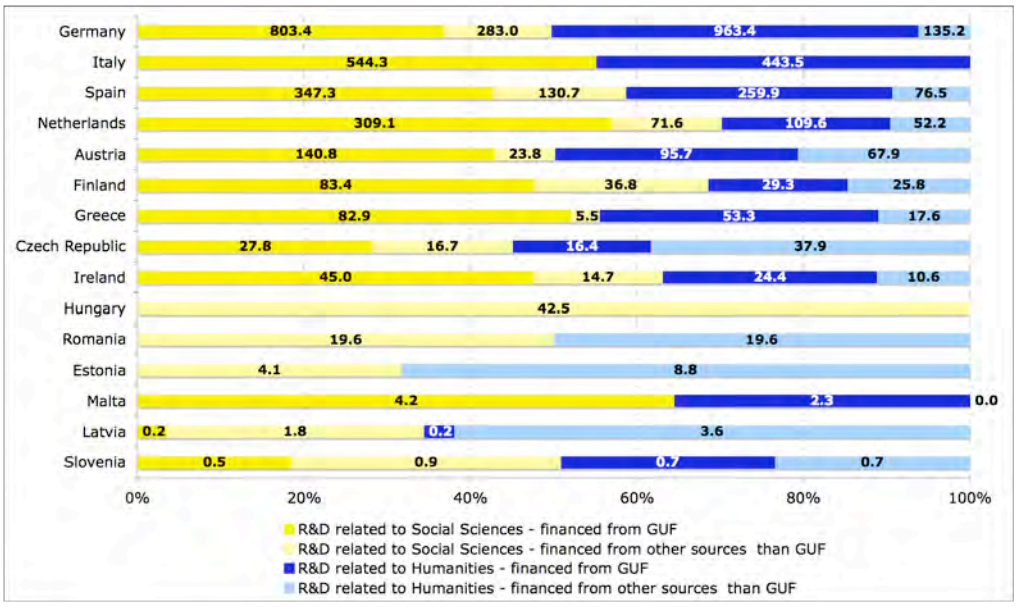
Clearly the information one would like to have is that relating to the amounts spent on SSH. While the share of SSH in GERD did not provide an all encompassing picture, the **government budget appropriations for R&D** (GBAORD) by socio-economic objective may be another interesting indicator. This indicator uses planned budgets, but again, not all countries report on the same breakdowns, and a recent re-classification of the objectives is also not helpful for current statistics. From the revised version, four socio-economic objectives are relevant here: social sciences and humanities financed each from GUF – the 'General University Fund' and again for both, other sources than GUF. Among the EU countries for which data is available, GBAORD related to SSH is the highest in Germany with €2bn in 2008, followed by Italy (€987m) and Spain (€814m), as depicted in Exhibit 4. The lowest spenders are Malta (€6m), Latvia (€5m) and Slovenia (€2m). R&D related to SSH tends to be financed from the general university funds (GUF), except in Latvia, Slovenia and Czech Republic, where funds come principally from sources other than GUF.

Exhibit 3 Shares of GERD in SSH by sector of performance, 2007, in pps 2000



Data: Eurostat
Calculations: Technopolis Group
Notes: (1): IE, IT, SE: 2006; BE, LU: 2005; CH: 2004; NL: 2002
(2) BE: 2005 data; IT, HR: 2006 data
(3): BE, LU: 2005; IT, UK: 2006
(4): MT, IE: 2006; ES: 2002

Exhibit 4 Government budget appropriations for SSH 2008 (in €million pps 2000) (1)



Data: Eurostat
Calculations: Technopolis Group
(1) MT: provisional values 2008; IT: 2009; EL: provisional values 2007; LV: 2007 value for Humanities – GUF

Acknowledging the limitations of the analysis due to the fragmented availability of data per country (Table 1), the country with the highest **number of researchers** in SSH in 2007 is the United Kingdom with more than one hundred thousand researchers in the higher education sector alone, followed by Germany (60,000 in HEI) and Spain (47,000). The second sector in which a high number of SSH researchers can be found is the government sector while very few SSH researchers do work in the business sector.

Table 1 Total number of researchers in SSH, 2007, Head count

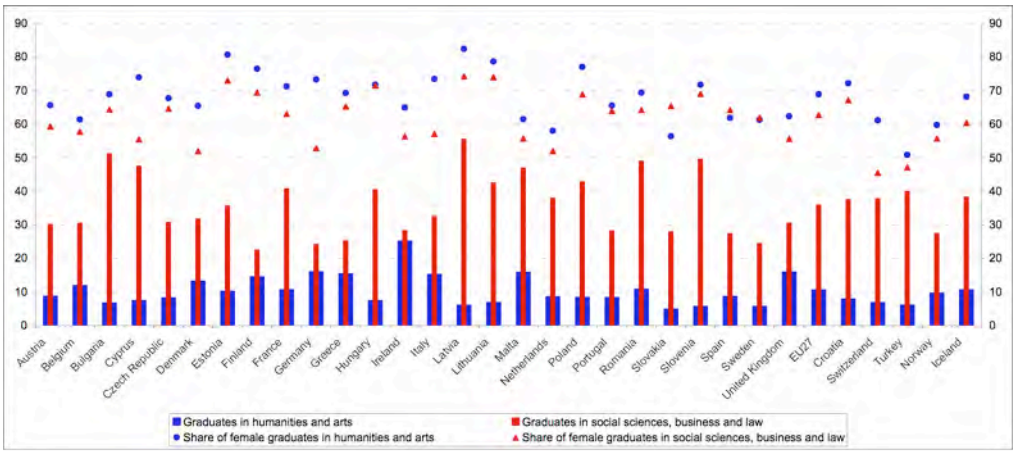
	Higher Education Sector (1)	Government sector (2)	Business Sector (3)	PNP sector (4)	All sectors
Austria	8303	1425		85	
Belgium		448		5	
Bulgaria	1737	1085	18	23	2863
Croatia	2459	772	12	0	3243
Cyprus	415	70	36	22	543
Czech Republic	5037	1907	210	43	7197
Denmark	4613	720		25	
Estonia	1572	346		48	1966
Finland	7229	1106			
Germany	60606	6980			
Greece			280		
Hungary	8543	1913	225		10681
Ireland	3557	73			
Italy	25618	2845		2294	
Latvia	2423	283			
Lithuania	4771	414			5185
Luxembourg	157	98			
Malta	296	17	10	0	307
Norway	8216	1804	38		10058
Poland	22165	1308	277	59	23809
Portugal	10065	780	965	1377	13187
Romania	3261	1299	198	5	4759
Slovakia	4508	711	74	0	5293
Slovenia	862	590	21	5	1478
Spain	47002	2548		99	
Sweden	13404	867			
Turkey	25011	:	291		23505
UK	101759	1319			

Data: Eurostat
Data treatment: Technopolis Group
(1): IT, IE, TK: 2006; LU: estimated
(2) IE, MT, IT: 2006; BE: 2005
(3): PT: estimated, TK, MT: 2007; EL: 2005
(4): BE: 2005; IT, RO: 2006

Compared to the previous indicators, the data on higher education graduates and even the breakdown by fields and by sex is available for all EU countries. Following Exhibit 5, **SSH graduates** represent at least 30% of all higher education graduates in the EU27 and Associated Countries. In all EU27 countries, the majority of SSH graduates is female. In the Baltic States, the share of female graduates is the highest at around 80%. In Switzerland and Turkey, there are more male than female graduates in SSH. The country in which there are more graduates in humanities and arts as a share of all fields is Ireland (25%), followed by Germany, UK and Malta (16%). The lowest shares are to be found in Slovakia and Sweden (around 5%). Around half of higher education graduates can be found in the field of 'social sciences, business and law' in Latvia (55%), Bulgaria, Slovenia, Romania, Malta and Cyprus. Ireland is the only country where the share of social sciences on the one hand, and humanities on the other, is almost balanced. In all other countries, the social sciences dominate.

In absolute figures, out of the 4.1 million higher education graduates in the EU27 in 2007, 1.74 million were in the SSH. This starts with below 10.000 SSH graduates in small MS such as Malta (about 1.600 graduates), Cyprus (2.300), or Estonia (5.400), but all other MS are above 10.000 or even above 100.000 such as France (299.000), Poland (269.000), UK (254.000), Italy (168.000), Germany (160.000), and Romania (120.000).

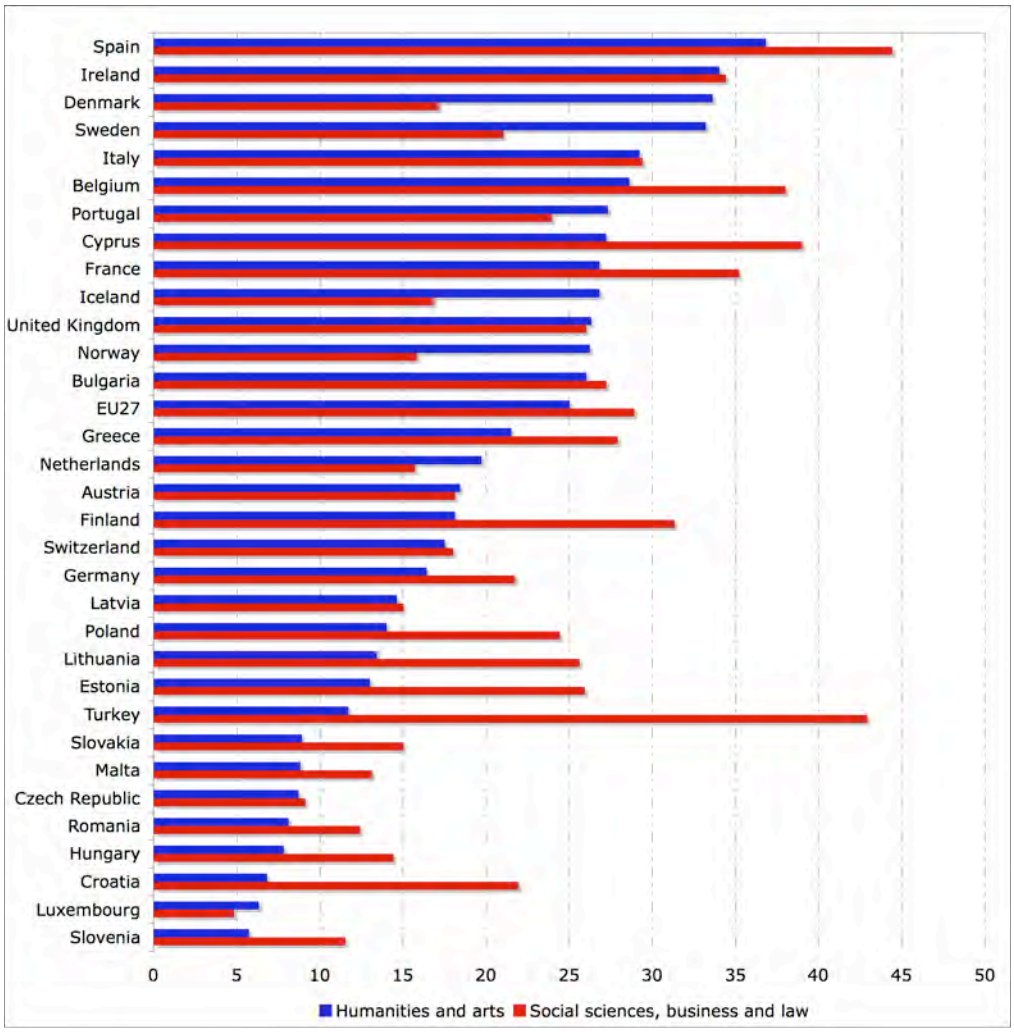
Exhibit 5 SSH graduates by gender and as a share of all fields, 2007 (1)



Data: Eurostat
Treatment: Technopolis Group
(1): EU27: Technopolis calculation; LU: data not available

Given the high numbers of SSH graduates, one may wonder, if all these graduates also find a job in their field of study. Exhibit 6 shows the occupation mismatch per country of higher education graduates in SSH aged 25-34. In general, the graduates from 'humanities and arts' and 'social sciences, business and law' are most likely to be occupied outside their own occupational domain. For the EU27, around a quarter of the graduates in humanities and arts have a job that does not match their field of education, and this rises to almost 30% of the graduates from 'social sciences, business and law'. The country in which the mismatch is highest is Spain (more than 35% of the population aged 25-34 with a higher education level in humanities/arts and almost 45% in 'social sciences, business and law'). Interestingly, in Turkey, the mismatch in humanities and arts appears to be much lower than in other countries, whereas the mismatch in the field 'social sciences, business and law' is above 40%. The countries in which the occupation of the population tends to fit most with their higher education level in SSH are Luxembourg and Slovenia.

Exhibit 6 Share of education/occupation mismatch of SSH graduates, 2003-2007 (1)



Data: Eurostat
Treatment: Technopolis Group
(1) ISCED 5-6, of persons aged 25-34

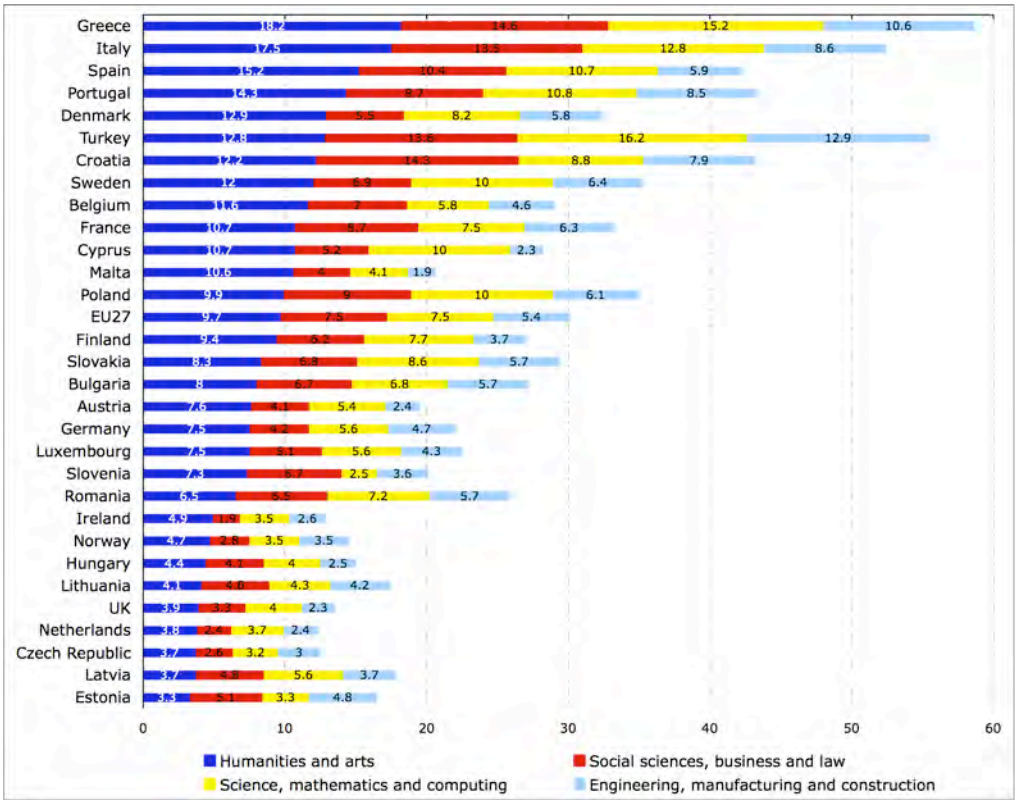
Another interesting figure for prospective graduates relates to employment – or unemployment figures. The Bologna indicators also provide information on the shares of unemployed graduates by field.

Exhibit 7 shows that in the majority of countries (22), the rate of unemployment is particularly high for the 'Humanities and arts' field. The 'Social sciences, business and law' graduates were less often unemployed. Only in Lithuania, Estonia, and Croatia did they have the highest rate. Unemployment is also faced by the (more often looked at) population of S&T trained individuals. In Latvia, the UK, Romania, Poland, and Turkey this group faces higher rates of unemployment.

The occupation mismatch and unemployment rates need to be seen in relation to the sectorial or industrial structures of the different countries. While most EU countries (still) focus more on the *manufacturing* sector (NACE Section D) (which tends to employ more S&T graduates), service related sectors like *Financial intermediation* (NACE J), the *Real Estate, renting and business activities* (NACE K), *Public administration* (NACE L) and *Education* (NACE M), etc. are less dominant in most European countries. However, while they still provide fewer employment opportunities (and numbers of employed), they show higher growth rates than the

manufacturing sectors.[1] One may conclude that service-oriented societies will have a higher demand for non S&T graduates than under the manufacturing regime. Considering that SSH graduates often make up more than 30-40% of all graduates in several EU countries, but that these countries offer more employment opportunities in manufacturing sectors, a relatively high rate of employment mismatch can be explained.

Exhibit 7 Unemployment rate by field of study, 2003-2007

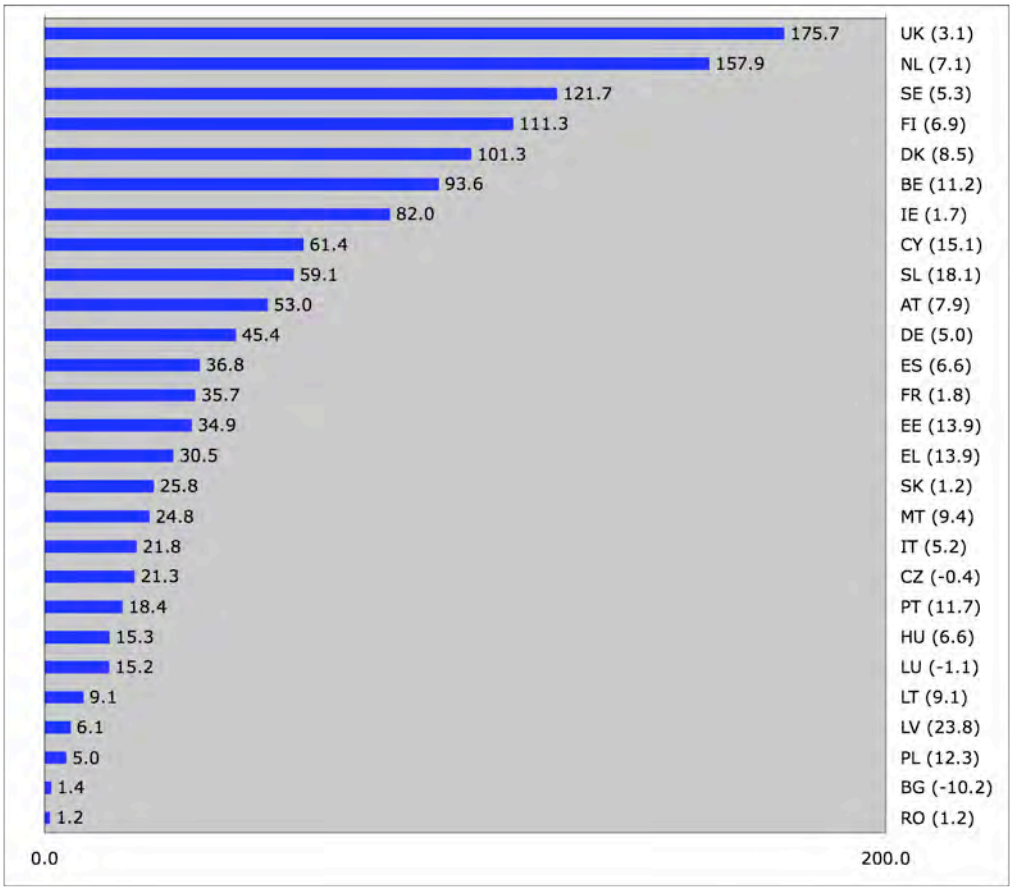


Data: Eurostat
Treatment: Technopolis Group
(1) ISCED 5-6, of persons aged 25-34

Bibliometric data provides a valuable insight towards providing definitive information on scientific performance and cooperation. Again, one should bear in mind that the data source for this type of information is a privately held source, and does not provide a picture on the whole scientific output but on a set of publications in internationally, peer-reviewed journals. There has been criticism of the use of the Thomson Reuters databases (i.e., the Web of Science and related products) in particular concerning SSH, but a careful use of this data at country level as well as growth rates provides useful information. One may also need to acknowledge that the advent of Elsevier's Scopus has an impact on the further improvement and broader coverage of SSH in the WoS. Even if there is a lot of scepticism, bibliometric indicators based on these databases are widely accepted performance proxies.

[1] European Commission (2010): International Science & Technology Specialisation: Where does Europe stand? Key Figures series

Exhibit 8 Number of social sciences publication per million population 2005 and average annual growth 2000-2005 (in brackets)



Data: Thomson Reuters,
Treatment: CWTS/University of Leiden for DG-RTD
Calculations: Technopolis Group

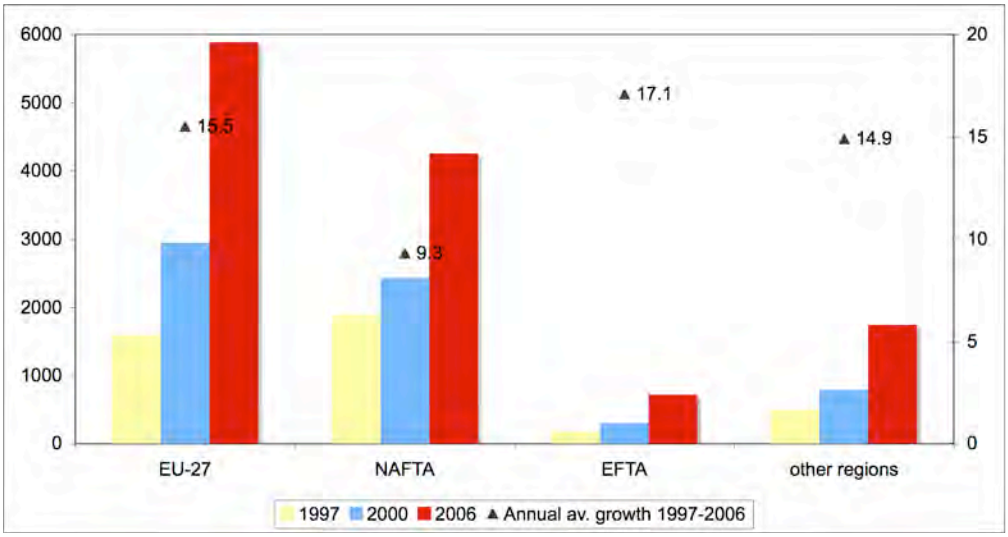
The share of the social sciences publications in a country's basket of scientific disciplines is very important in two of the larger MS: the UK (12.3% in 2005) and the Netherlands (10.1%). In Malta and Cyprus, the shares are even higher with 13.7% and 14.7% respectively, but one needs to bear in mind the total number of publications and the weight of the scientific enterprise of the countries. The EU27 average is 5.5%. Only a few old MS are below this share such as Italy or France while among the new MS Estonia and Slovakia are above that share. It is equally well above average in the Scandinavian countries, Ireland, Belgium and the Netherlands. This 'preference' is also very much mirrored in Exhibit 8 which provides the total number of social science publications per million inhabitant (2005), and the publication growth of these publications between 2000-2005. If one takes into account the publication advantage of English-speaking countries, it seems surprising, that between the various countries (and their national languages), a number of small to medium-sized countries (in terms of overall scientific productivity) do far better than some large ones. Even if the social sciences are published predominantly in national languages (and the majority not necessarily in scientific journals), one can explain the high shares per population by for example an openness to English (as the dominating publication language), a more open co-publication behaviour, or a better coverage of national journals in the Thomson Reuters database. There is evidence for all three. For example, the exceptionally high growth in Lithuania is mainly due to the fact that a Lithuanian

national SSH journal was added to the database and as a result of this the numbers increased. For many years openness to English language publications for all scientific disciplines can be observed in the Scandinavian countries, the Netherlands and Belgium. This is also true of the shares of international co-publications compared to all publications. For 2005 total publications and co-publication shares, the scientifically smallest publishing countries Malta, Cyprus, Latvia, Luxembourg, but also Bulgaria, Slovenia, Estonia, and Austria show very high co-publication shares. Taking the full-counting principle for co-publications, one in two UK publications is internationally co-authored, but almost all Belgian, Finnish, or Danish ones are internationally co-authored.

Is this international co-authorship nurtured by the European funding via the Framework Programme? The total number of co-publications in the social sciences with EU partners grew by an annual average of 15.5%. between 1997-2006. There were almost 6000 co-publications in 2006. A higher growth rate was only achieved with EFTA partners (17.1%) but the number of publications remains much smaller. With North American partners growth in absolute and relative terms can be observed. While this is the lowest growth rate, in terms of absolute co-publications it reaches almost 2/3 of the intra EU co-publication share. Other countries are growing in importance but remain on a lower absolute level.

If one looks at the intra EU numbers, they are predominantly within the old MS. It is true that, until their accession to the EU in 2005, the new MS were much more looking for North American partners than European ones. This may have changed since, but clear empirical evidence has not been collected since then.

Exhibit 9 Total number of co-publication in the social sciences 1997, 2000, and 2006, and average annual growth 1997-2006



Data: Thomson Reuters,
Treatment: CWTS/University of Leiden for DG-RTD
Calculations: Technopolis Group

Considering all the data presented – and taking into account the data gaps, what are the main messages? Compared to other scientific fields:

- SSH research occupies up to 20% in GERD, and the variance between countries is large ranging from 6% in the Czech republic to 25% in Cyprus.
- In terms of government's budget appropriations, the global university funding is in most countries providing at least 50% - in some countries such as Italy or Malta, they make up even 100% of SSH related research. Funding from other sources is

very important in most central-eastern European countries, where large Academies, and thus public sector research, prevails.

- Given the poor data situation concerning researchers and different counting methods in the MS, the available data suggests that about 367.000 individuals do SSH education and research in the EU27. The majority (340.000) is engaged in university education and research.
- 40% of all graduates of higher education can be found in SSH fields. The social sciences provide many more graduates than the humanities in all countries except Ireland, where the shares are almost equal. In the humanities, between 50-80% are female graduates, in the social sciences the share of female graduates ranges between 45-75%.
- Many SSH graduates face employment outside their fields of study. Between 6 and 37% of graduates in the humanities are not employed in humanities-related jobs. The mismatch is even higher for social science graduates, - between 5 and 45% work in unrelated fields.
- In terms of employability, in most countries the arts and humanities graduates are the group with the highest share of unemployment. It ranges from a low of 3% in Estonia to 18% in Greece.
- Apart from education students, SSH researchers produce scientific output. In terms of their international scientific article publications, the UK, the Netherlands, and the Scandinavian Member States do particularly well in terms of publications per population.
- When it comes to internationalisation of research, international co-publications of EU27 SSH researchers grew by an annual average of 15%.

3. Comparative structural analysis of European SSH landscapes

3.1 Governance level

How do the institutional settings across the EU countries and non-EU countries compare? Are there mainly commonalities or also discrepancies, and which are they? In order to obtain a rather broad picture of the 27 countries and their SSH governance systems, we analysed the individual descriptions of main actors in the field of policy formulation, coordination, and advice. Policy formulation however is pretty much irrelevant without its implementation level. Therefore, we also looked at which type of organisation or institutional grouping implements policies. While policy formulation and advice can be rather straightforwardly defined or understood, implementation is used in a wider sense.

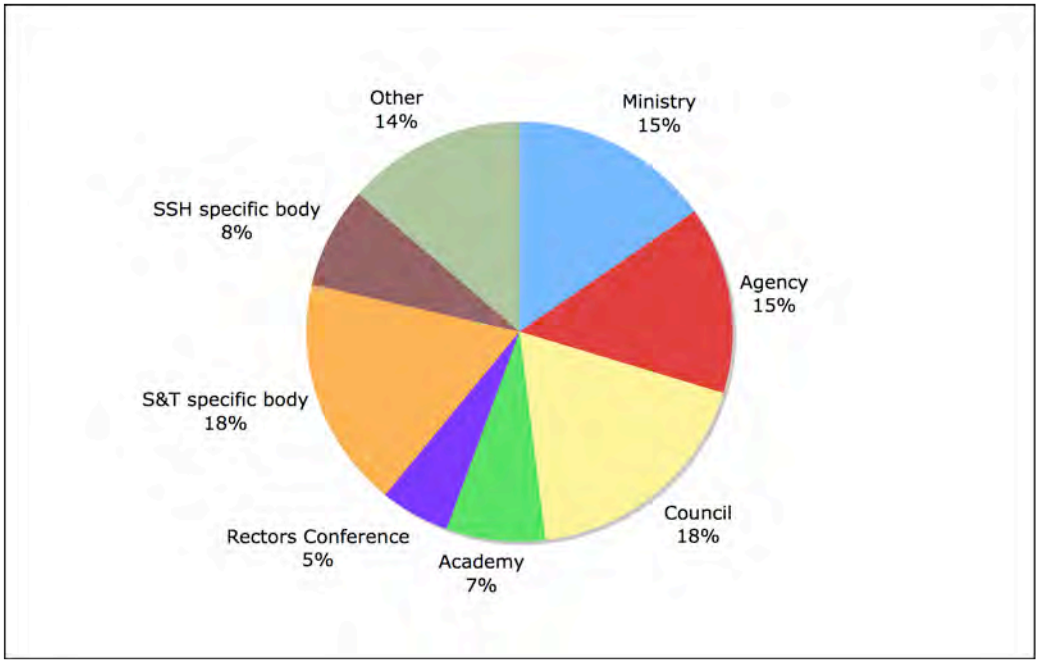
While there are clearly different levels of complexity of the systems as well as differences in the level of details of descriptions in the METRIS profiles, one may reduce the analysis to the core players. In doing so, a limited number of organisation types as well as main functions can be identified.

In terms of easily specifiable organisations or types of organisations, the most frequently mentioned are, ministries, agencies, councils, academies, and rectors conferences. In addition to those, a number of S&T committees and groupings as well as SSH specific bodies are mentioned. Beside the types "ministry" and "rectors conference" – which are clearly defined across the countries - agencies, councils, and academies have a less narrow connotation for many countries. Academies for example are either the umbrellas of learned societies or scientists, or are umbrellas for many research institutes. More distinctions are described in the specific sections below.

In terms of functions, the main distinctions were made between policy formulation and policy advice, and functions that can broadly be subsumed under the implementation function, namely: funding, programme management, evaluation, and coordination. Given that the term 'implementation' was explicitly stated as a heading, it is often mentioned in conjunction with other implementing tasks such as programme management or the allocation of funding.

While the country landscapes also list those institutions which seem somewhat only remotely connected with SSH advice, funding and the like, the following analysis aimed at focusing on only the most important and relevant institutions. Thus, a total of 191 individual bodies were extracted as the main SSH relevant bodies for the 27 countries currently covered under METRIS. In terms of distribution of organisation types by countries, the following allocation can be seen:

Exhibit 10 Overall distribution of organisations by type



Source: METRIS country reports
Calculations: Technopolis

With the identification of the various institutions, their roles and responsibilities were equally addressed. The following table gives a matrix-type overview of the main types of organisations and their functions. Details are discussed in the following sections.

Table 2 Organisations and functions matrix

	Ministry	Agency	Council	Academy	Rectors' Confe-rence	S&T specific body	SSH specific body	Other
Policy formulation								
Policy Advice								
Implementing								
Funding								
Programme management								
Evaluation								
Coordination								

Source: METRIS country reports
Calculations: Technopolis
Note: red: Strongest function per organisation type, blue: very often mentioned functions, yellow sometimes mentioned function, white: not mentioned

3.1.1 Institutions and functions at decision-making level

The governance level is in many cases ruled by **decisions of the parliament and the government**. There may also be a "national strategy" – often in the form of a legislative text that provides the basis for the funding decisions and how much money is allocated to the various ministries or departments. This concerns for example the Spanish "National Plan", the Swiss " ERT Message", the Italian "National Research Programme". In the Netherlands, this strategic aspect is covered in the so-called "Innovation Platform", a high-level coordination and strategy-setting mechanism in the Dutch governance structure headed by the Prime Minister. While in general these "national strategies" provide the general layout for R&D policies and funding decisions, the Dutch Platform selected key emerging areas which became a focus for competence building and funding.

A coordinating body – in general a Council that includes the prime minister among other relevant ministers – exists in several countries such as Finland, Romania, Slovakia, Spain, etc. In general, the **governments delegate functions related to the implementation of SSH policies to the ministries**. In all EU countries, the main ministry responsible for allocations and policy making is the Ministry of Education and Research. This name of course varies but it contains most likely "science", "culture", "research", "innovation" and the like. While this is the dominant ministry, other ministries may play an important role as well – either they are entitled to pursue their own R&D strategies, they maintain SSH related research institutes, commission relevant studies, or fund SSH in one way or the other.

Within the non-EU countries, other governance models exist: Israel is a slight exception as there is no single ministry responsible for R&D, but R&D policy in general is the domain of the "Chief Scientist" – a position available in any ministry. Switzerland is also an exception in the sense that their leading "State Secretariat for Education and Research" belongs to the Ministry of Domestic Affairs. In Turkey, a "Supreme Council of Science and Technology" is the determining body.

Despite the fact that **regional level** mattes and regional policies can be found in several countries e.g., in Austria, Italy, Germany, and Spain, Belgium is the only EU country where a regionalised research and education approach dominates. The federal level still has a say in some research domains of national interest, but the agendas for the universities and research institutes are set by the language communities and the Flemish and Walloon regions.

A number of countries have a rather lean or centralised governance structure. In some smaller countries such as in Greece, Lithuania, Slovakia or Switzerland among others, a single department or one to three units at the ministry are responsible for the development and implementation of the country's research policy. Poland is a country currently aiming at creating a more functional differentiation. It is a highly centralised country where all functions from planning to funding are concentrated in one Ministry. However, the creation of specialised agencies is under way.

The more functionally specialised, decentralised, or regionalised a system, the more there is need for **coordination among policy-making bodies**. This structure is rather generic and not SSH specific. In Israel, the Chief Scientists Forum, assembles all the Chief Scientists while in Ireland the Inter-Departmental Committee on Science, Technology and Innovation is the forum for the various departments. Federal countries which need to cope with a further level of R&D policy making and funding tend to have a body dedicated to coordination between the federal and regional level: in Germany this is the Joint-Science-Commission, in Italy the Permanent Committee Between the State and the Regions, or in Belgium the Inter-Ministerial Conference on Science Policy.

In terms of **policy formulation**, the majority of countries provide the prerogative to the relevant lead ministry. Only in a few countries do slightly different organisational arrangements exist such as the *Research and Innovation Council* in Finland. The dominant position of the UK Research Councils is also a rather specific case not found

elsewhere in the EU. Policy formulation can also come from **specific S&T bodies**. These bodies together with **councils** are the second type of institutions relevant to policy formulation.

The specific S&T bodies are often coordination bodies bringing together not necessarily only policy makers, but also representatives from other academic organisations, councils or even the social partners. Examples are the Finnish *Research and Innovation Council*, the Portuguese *Coordinator Council for Science and Technology*, or the Slovak *Government Council for Science and Technology*.

While the role of agencies and academies in policy formulation as well as in policy advice is rather negligible, in general the ministries receive **advice** from independent or semi-independent bodies such as Research or Science Councils, Rectors Conferences or dedicated commissions dealing with the Social Sciences and Humanities within the Councils and other relevant science bodies. The 'policy advice' function is most likely the most diverse and involves the broadest range of groupings. There is formal policy advice – for example if a body has consultancy rights and/or may provide an opinion. This form is regulated differently in every country according to the existence of relevant S&T bodies. One should also not forget the important educational aspects of SSH – here the Rector's Conferences as well as Education Committees or Councils come into play. There are also a number of specific advisory bodies such as *Ethics Councils* (Romania, Germany), that can be consulted but the majority of advice seems to be not formally required but provided voluntarily by the various existing learned societies, researcher's associations, or think tanks.

In the smaller European countries, the number of formal advice-giving bodies is general limited to one or two – which are also often generalist organisations and do not only provide advice, but are equally involved in the implementation of policies, management of programmes, funding institutions and setting evaluation standards. Examples are the Norwegian and Lithuanian *Research Councils*.

A number of countries have specific SSH relevant bodies, often a committee or council like the French *Council for the Development of Humanities and Social Sciences* or the Greek *Council for Humanities and Social Sciences*. While the specific S&T bodies have a more political touch in the sense that ministries are included in one way or the other, the SSH specific bodies are often sectoral scientific councils or sub-committees of Science Councils or Academies.

The most direct effect of policymaking is via **funding** – which fields or disciplines obtain how much and which research topic can thus be pursued. While this issue is taken up in greater detail in its own specific section below, it is interesting to compare the funding function at institutional level. While in all countries the budget for R&D is decided at government level, it is in most countries then allocated to the relevant ministry of research, science, innovation, education – whatever the specific name. In general in all EU countries the research ministry has the budgetary and administrative power to allocate funding. In many countries, budgets are then allocated to executive agencies which belong directly to the ministry like the Slovak *VEGA* and *KEGA grant agencies* and the *Slovenian Research Agency*. In a few eastern countries, a large share of the R&D funding goes directly to the Academies of Sciences, which obtain their budgets independently of a ministry. Their budgets are included in the state budget as an individual item, and are allocated independently within the Academy. An exception is Poland: up to now, the ministry allocates the funding directly to the various research performers without an intermediary; however, this system will change soon, with the establishment of dedicated implementation agencies.

The governance level can also be checked for another function, which is equally taken up in greater detail below, namely: evaluation. While evaluations are in general carried out by specific institutions, they are nonetheless often the result of a demand voiced by the governance level such as ministries or S&T councils (see Chapter 5.3).

3.1.2 Implementation level

The term implementation embraces all the stages after policies were formulated. It can begin with the planning of the implementation of national strategies, when ministries follow upper-level decisions, or the implementation of research policies set within the ministry or together with other research and education actors. Implementation of policies involves in general a number of actors and groupings. The implementation of the Bologna process for example involves not only the relevant ministries (at national or regional level), but also the array of associations of rectors, professors, students, scientific disciplines, the research councils and almost any other body with a vested interest.

In our SSH landscapes, implementation is most often linked only to the allocation of funding and the management of programmes. However, in a number of cases, a third function was mentioned, namely the evaluation of research proposals which often comes with the implementation of a research programme. While this evaluation is in general executed by the managing authority, the ex-post evaluation of a whole programme, institution, or field is often requested by policy makers and carried out by external expert organisations (see also Chapter 5.3).

What are the main types of implementing organisations and their implementing functions?

- Several countries' lead ministries have established **dependant agencies** or other types of executive organisations, which operate with a relative functional, and/or administrative and/or financial autonomy. The former can be found in several eastern Member States, the latter can be found in the UK with the *Research Councils* or in Germany with the research foundation *DFG*. Funding Agencies are established in many countries. Every so often the agencies not only provide the budgets, but often also manage programmes or projects such as in Portugal, Slovakia, France, Belgium, Slovenia etc.)
- Exceptions are - Italy, which does not have special agencies or councils that implement the policies. Instead, the leading Ministry of Education and Research manages the research programmes on its own with the help of specific **evaluation committees**. Poland also does not yet have dedicated implementing bodies – so far, the whole process is managed by the Ministry of Science and Higher Education.
- In most Nordic countries as well as in the UK and Ireland, **Research or Science Councils** with a rather broad executive power exist. While these councils are also involved in policy advice, their main function is the implementation of policies – be it in the form of allocation of funding, programme design, programme management, evaluation of programmes etc. An example of a council only focussed on policy advice is the German Science Council. However, its advisory power is based on its 'evaluation prerogative' concerning evaluations of single institutions as well as disciplines; its reports form the basis of a number of unpopular budget cuts or the closure of institutions.
- There are basically two types of **Academies**: In most eastern European countries' 'Academy of Sciences' are umbrella organisations for research institutes that are most likely divided in sections such as Natural Sciences, Engineering and Social Sciences. These Academies are often large research performers in terms of personnel and funding. Apart from doing research, their functions range from policy advice to individual ministries or governments, involvement in policy making (for example by providing information, involvement in evaluation processes etc), and the setting of their own research agendas. As the Academies often obtain their budget directly from the Government, they are rather autonomous in their spending. They also act as a kind of funding agency providing funding to university researchers and managing programmes.

The second type of Academy is equally an umbrella organisation, but of individual researchers not research institutes. It is thus a scholarly association. These Academies are divided into numerous commissions or sections, representing the various disciplines. This is the case for example in Sweden or Turkey. The scholarly academies' functions in terms of governance is limited to policy advice. If they possess their own budgets, they tend to spend it on publishing grants, travel subsidiaries, and the award of scientific prizes.

- There are also **Science Foundations** but their administrative arrangements differ slightly. In Israel, the Science Foundation is the 'executive arm' of the Israeli Academy of Sciences. In other countries such as Estonia, Portugal, or Croatia, the Science Foundations provide management and implementing functions mainly for the main ministry. The Swiss National Science Foundation allocates competitive funding to the Swiss universities and has thus a function similar to that of the German research foundation DFG.

3.2 Funding of SSH

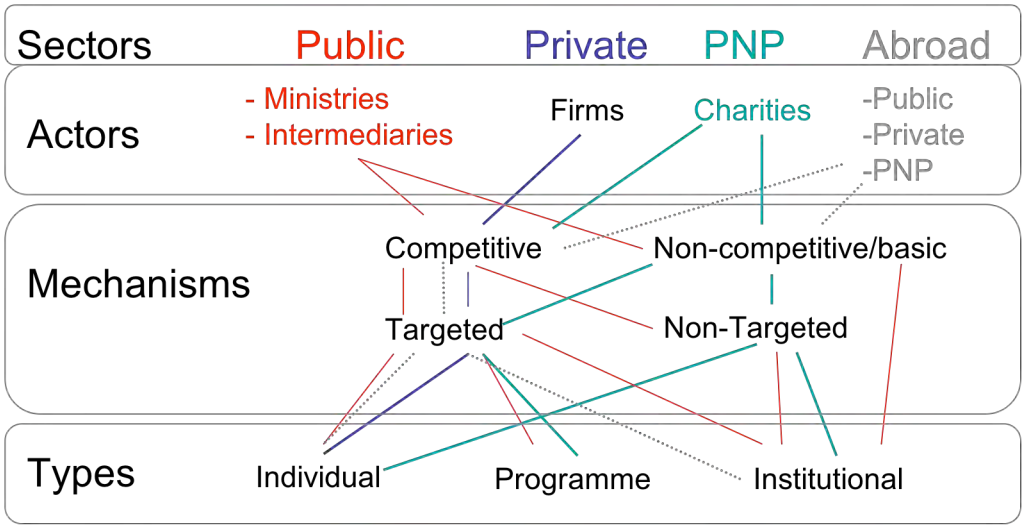
Unfortunately, the information on funding is the trickiest – there is no Eurostat data available on funding by scientific disciplines. This does not mean that the data is not available at national or regional level. The problem however is, that there seems to be no one way to account for the funding. – This seems largely understandable given the variety of funding mechanisms (see below). Given the funding sectors (public, private, public non profit, abroad), the performers (public, private, not for profit), types (basic, programme, individual, ...), and mechanisms (competitive or non-competitive), there are numerous conceivable combinations and differing levels of importance – in every country. To mould all the various options into a consistent and objective scheme for the collection and interpretation of data seems to be a necessary task for the future.

To what extent are the METRIS country reports useful in providing information which whilst not fully comparable may at least to a certain extent provide information which is not available from other sources?

The reports aim to be based as much as possible on data from national statistical offices, main funding bodies or main performers. The data as such is not harmonised according to international agreements as very often it is used strictly in a national context. A stringent comparison between countries is therefore not necessarily possible. However, analysing the information provided and synthesizing it in a constructive and consistent way can indicate the differences and similarities in terms of funding types and mechanism for example, and their dominant or marginal role for the funding and the performing sectors.

What are the main sectors, mechanisms and types of funding? The following Exhibit provides an overview highlighting the dominant types without trying to provide all possible types.

Exhibit 11 Overview of funding system



Source: Technopolis-Group

3.2.1 Sectors of funding

On the basis of Exhibit 11, there are basically three sectors, namely the public, the private, and the public-non-profit sectors. All three are also subsumed under the heading "Abroad". The public sector includes the government, regional governments, and in this respect competent ministries, but also funding or grant agencies which are allocating public money. The private sector includes private firms while the non-profit sector is largely composed of charities, philanthropic individuals or foundations, but also NGOs or research institutes with a non-profit status. In terms of the sector "Abroad" one can think of governments that commission research abroad, national or international charities that allocate money outside the country they are registered in, and finally international organisations such as the EC or UNESCO.

Many countries provide accurate figures at least per funding sector. For example the public sector is most likely to be the dominant funding sector. The public sector finances directly and indirectly: while institutional, basic funding is often allocated directly to the universities and research institutes, programme funding or individual grants are channelled via funding agencies. While there is most likely one most important ministry providing the lion's share to the research institutions, other ministries also fund individual research institutes or universities (e.g., in Israel, the Czech Republic, Ireland, or Germany).

In many countries the (public sector) Structural Funds play a more and more important role for example concerning research infrastructures or the full development and maintenance of instruments such as Centres of Excellence. If all types of funding are taken together, about 90-93% of SSH funding comes from public sources.

The private sector is less important but in a number of countries, this sector is not negligible with around 7% (HR, AT).

Funding from abroad for SSH and the non-profit sector funding varies considerably, although their role is limited – at least on paper. In some countries the public non-profit sector funding for SSH amounts to almost zero percent (Croatia), whilst it reaches 1.8% in Austria. The funding from abroad is equally variable and it also shows that non-EU countries do not benefit from the Structural Funds. In 2007, Croatia's funding from abroad was 2.1% while 2.5% of Austria's SSH research benefits from EU funding and another 0.73% from other foreign funding. Italian university SSH research obtained 8.8% of its funding from the EU and other international sources in

2001-2003. The public non-profit sector plays a marginal role with 0 – 0.5% of funding SSH on average.

3.2.2 Funding mechanisms

Non-competitive funding

Non-competitive, basic, core, or institutional funding are almost synonyms given that in many countries, the public sector institutions receive a basic funding, which serves their institutional needs for paying salaries, maintaining the research infrastructure and paying for current costs such as electricity, stationary, printing etc. This money is allocated to the institutions according to 'distribution keys' which take into account for example the number of employees, students, surface of labs etc. This allocation takes strictly into account what is there, and – if there is a negotiation element, what is needed (for example if an important infrastructural investment is needed, or if departments are to be closed or others to be established etc.).

Non-competitive, institutional basic funding is the main mechanism of the allocation of funding for the higher education sector and public research institutes. In some countries (DE, BE, ES, UK), where research is largely regionally organised budgets are centrally allocated by the government – most often the competent Ministry of Education/Science. In others, for example federally structured countries such as (in Belgium), regional governments or language communities provide the allocations.

The logic for the public sector to provide the basic funding is provided by the public good character of research and education. However, mostly due to scarcer funding supply and an increasing demand for accountability, the public sector responds by allocating growing shares on a competitive basis.

Competitive funding

While the majority of the budgets for the universities and public research institutes come from public sources, competitive funding is a type of funding that applies to sources as well as instruments. A public organisation like a university or research institute may compete for private as well as for public funding. Competitive funding from the business sector or public non-profit sector can be raised in many forms such as commissioned studies, individual grants or individual project funding. For many countries, the competition for grants of individual research projects in their national programmes is an important source and stimulus for the advancement of SSH research.

As a mechanism for funding it is of growing importance in many countries. The trend may be fostered by scarce financial resources and the political wish to unlock existing structures of public research institutions and in particular the universities[2].

A competitive element between institutions in terms of basic funding was largely absent in all countries where education and research is predominantly publicly funded. In countries where universities generate a larger share of their budgets via tuition fees, the competition element is not new. In Europe, this model was previously only basically important in the UK, but it is gaining momentum in other countries as well. In Finland for example, the share of competitive funding of the universities has reached 24%. Interestingly, several of the eastern Member States have some elaborated keys on the basis of which the funding is allocated to institutions. These keys do not only take into account structural figures such as the number of researchers, but publications – a clear output indicator – is often very prominently incorporated in the calculation (Poland, Czech Republic, Hungary) as well as the amount of external funding attracted (Switzerland). While it is arguably difficult for

[2] European Commission (20%): Mobilising the brainpower of Europe: enabling universities to make their full contribution to the Lisbon Strategy. SEC(2005) 518

policy makers to rededicate budgets which seem to be set in stone, some try to allocate any additional funding through a competition. In Germany for example, this happens through the so-called "Excellence initiative", and in Finland the share of competitive funding increased over the years to 24% of the institutional funding.

Competitive funding has one direct and many indirect effects: the most apparent one is competition. Very well- positioned institutions - and in this context this means institutions with a very good research output and reputation – will most likely be the winners in terms of raised shares of competitive funding. Less fit institutions will either make efforts for a structural change in order to survive, merge, or may have to rely on and live with a decreasing public, institutional budget, or, if all fails, exit the market. The same effects can be seen in the case of individual researchers For many, competitive funding is the only means to pursue their individual research projects or to attain a higher degree. Doctoral grants for example, are provided strictly on a competitive basis.

Competitive funding for individual researchers or research teams is an important instrument in Germany: a large share of the federal budget is channelled via the DFG. In 2008, a total of €358 million (15% of the DFG's budget) was allocated to SSH.

Targeted funding

A sub-type of the public funding category common in the Central-Eastern Member States is targeted funding. It is based on 'research intentions' – non-thematic, bottom-up fields or subjects, a university or research institute's department wishes to perform in the longer run. In these countries, the research units or departments following dedicated 'research intentions' obtain funding directly from the competent Ministry/Ministries, the Science Foundation, or the Academy of Sciences. Accidentally or not, from the funding point of view, this can be matched with the socio-economic objectives included in the government budget appropriations (GBAORD). There one can find for example the socio-economic objective within the general university funding, but also as a separate, thematic item. This is a dedicated budget for a priority regardless of the recipient. But of course, universities may also obtain relatively large shares from this objective. Its importance is obvious in the most Eastern Member States, possibly reflecting their traditional funding mechanisms (see also Exhibit 4). For Hungary for example the budget appropriation for socio-economic research is not at all coming from the general university funds but from other sources – which seems also to reflect that a lot of SSH related research happens in the Hungarian Academy of Sciences. Since in many Central-Eastern Member States the Academies are strong research performers it does not appear as too much of a surprise to learn that there, the budget appropriations for SSH research come substantially from sources other than university funding. For the Czech Republic for example the targeted funding for SSH accounted for 53% and the institutional one for 47% (2008).

Non-targeted funding

Given that METRIS deals with a clearly defined target, it comes as no surprise that the share of non-targeted funding does not play a significant role. Non-targeted funding as a mechanism for the allocation of funding is more often found for infrastructures which serve multiple purposes. However, disciplinary non-targeted funding can also be provided as individual grants and as such, benefits SSH research. Several countries provide data on "infrastructure expenses" (i.e., non-targeted funding). In Estonia this accounts for 10% of all funding expenses, and in the case of Ireland it was noted that the "*capital infrastructural funding programme (…) has been an important source of funding for investments made in SSH infrastructure.*"

3.2.3 Funding types

Institutional

Institutional funding, i.e. the salaries of researchers, overheads, and (some) funding for research and education, is also known as block or basic funding. It is an important

funding type in terms of scale and scope in SSH but not necessarily the most important one. Together with targeted funding it is the main type for the higher education sector and public research institutes. While in the federal or federally organised countries such as Germany or the UK, regional governments, 'regional' Councils or language communities (such as in Belgium) provide the allocations, in the centrally organised states, the budget is allocated by the government. In several cases (such as Italy, Finland, or Poland) the competent ministry provides the funding to a given university directly.

Times have changed significantly since all academic performers received their 'fair shares' without much proof of achievements. The institutional funding is largely allocated taking into account student and researchers' numbers but there is a variety of factors that can be taken into account such as lab space, the existence of a medical faculty, or performance indicators such as the number of awarded Ph.D., publications etc. In general, the total budget is provided based on agreed factors, and is then booked as a single title following public sector accounting standards. Then the traces of who gets how much and how much is spent on what gets lost at micro-level.

With some difficulty, one may identify the basic funding for dedicated SSH research institutes, but it is almost impossible for most countries to provide the amounts spent on SSH in the universities given their allocation autonomy and given that it is almost impossible to disentangle education and research tasks and budgets (something which is true for all disciplines). According to the individual country reports under METRIS, institutional basic funding makes up 45-56% of the 'SSH budgets' of universities and public research institutes. In Ireland, the country with the highest institutional shares, the figures were as high as 62% for the social sciences and 73% for the humanities.

Programme funding

The majority of programme funding is provided by the public sector. In many Eastern member States, a large share of funding is channelled via the national research programme. These programmes are organised like the EU Framework Programme, with public calls for given disciplines. In Slovenia, Slovakia, Poland, and Lithuania there are dedicated calls for the Social Sciences and calls for the Humanities. In most other countries there are individual thematic programmes (see Chapter 5.2).

The extent to which this type of funding is relevant to SSH varies but this targeted funding can reach up to 60% of the funding by type. Croatia for example noted that this type of funding is "*the most important policy instrument for financing SSH*". In Germany, at least at federal level (which is less important than the Länder level), programme funding increased from 54% in 2000 to 69% in 2008 at the expense of institutional funding which decreased from 44% to 21%.

In other countries such as France, Greece, or Finland, programme funding does not play a significant role for SSH funding – basically because there are no or almost no specific SSH-relevant programmes. For Finland however it was noted that programme funding is changing in terms of importance. In these countries however, institutional and/or individual funding plays at least until now, a more important role. A dramatic evolution from 'free' project-based funding to programme funding has happened in Italy, where in the 1970s almost 100% of research projects were freely chosen and funded. During the 1990s this share dropped to about 40% while the majority was fitting into targeted programme funding.

Programme funding is in general provided via competitive means such as open calls. This applies to the broad national programmes which are the dominant form of programmes in the eastern Member States, but also to specific programmes: project proposals in general go through an evaluation process prior to being chosen and funded (see Chapter 5.3).

Under the heading of programme funding, a variety of instruments can be subsumed. Somewhat 'classical' programme funding provides funding for individual research

projects of a team at a university or other research institution. However, this instrument has undergone some evolution and thus, the projects funded can be cross-institutional or cross-countries. There are Excellence initiatives as well as graduate schools (see for example Sweden, Finland, Switzerland, Germany, or Estonia). These forms of 'programme funding' are an important means for SSH. In Germany, SSH obtained 28% of all competitively available funding for graduate schools and 17% for cluster initiatives.

Interestingly, Structural Funds money seems likely to be used for the setting up and maintenance of Centres of Excellence – both Estonia and Greece mentioned this type of funding for the initiative while Ireland funded SSH research infrastructure between 2009-2013 with about €20 million annually.

Individual funding

Individual funding provided directly to researchers is in general given via grants. In many state budgets, a share is reserved for grants. These grants are often distributed via a grant agency such as the Science Foundations in the Czech Republic the Hungarian Academy of Sciences (HAS) or the DFG in Germany. The dominant mechanism for the allocation is via competitions. Individual funding allows researchers to pursue research projects of their liking or to pursue doctoral or post-doctoral research. This instrument addressing the needs of young researchers can be found in most countries. In terms of individual research project's funding, it is less common but in countries like Poland or Norway, researchers can still apply for individual project funding.

When it comes to individual funding, the MS do impose several restrictions: In Hungary for example, individual funding is limited to the university institutes affiliated to HAS. In the Czech republic, one needs to be of Czech citizenship and residing permanently in the country in order to obtain an individual grant.

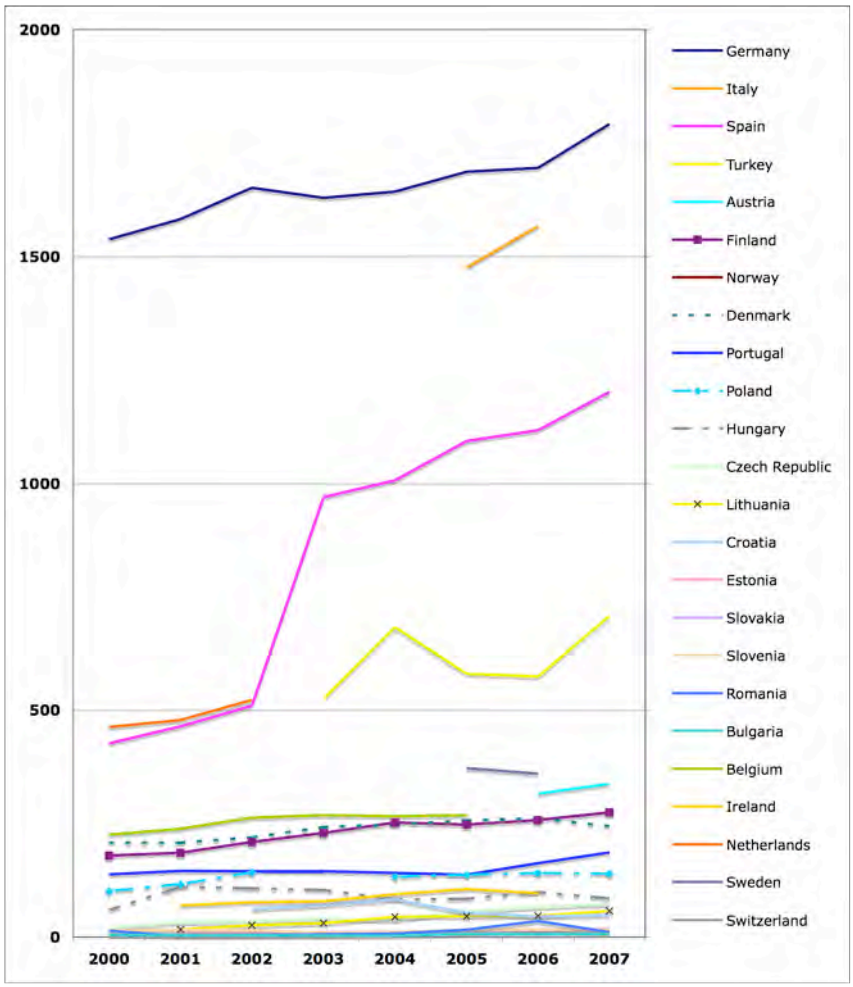
3.3 Research and education performers

In all countries, the public sector plays the dominant role in terms of performing SSH research. As can be seen from the available data in Exhibits 12-15, the higher education sector is the dominating sector for the METRIS-covered countries.

Even if Eurostat data for France and the UK is missing (and one would expect them to appear at the higher ends given that these are large countries), one can detect some interesting developments when looking at the countries for which data is available.

Concerning the higher education sector, the most important performing sector, one can find varying growth rates for the period 2000-2007: among the large countries Spain showed the highest growth with an average annual growth of 16% - for Germany it was 2.2%. Growth rates between 1.4% in Slovenia and 23% in Lithuania can be found next to real decreases in Croatia (-4.6%) and Romania (-3.1%). Interestingly, a number of small Eastern Member States have higher absolute expenditures than several medium-sized EU15 countries such as Sweden, Belgium, or the Netherlands.

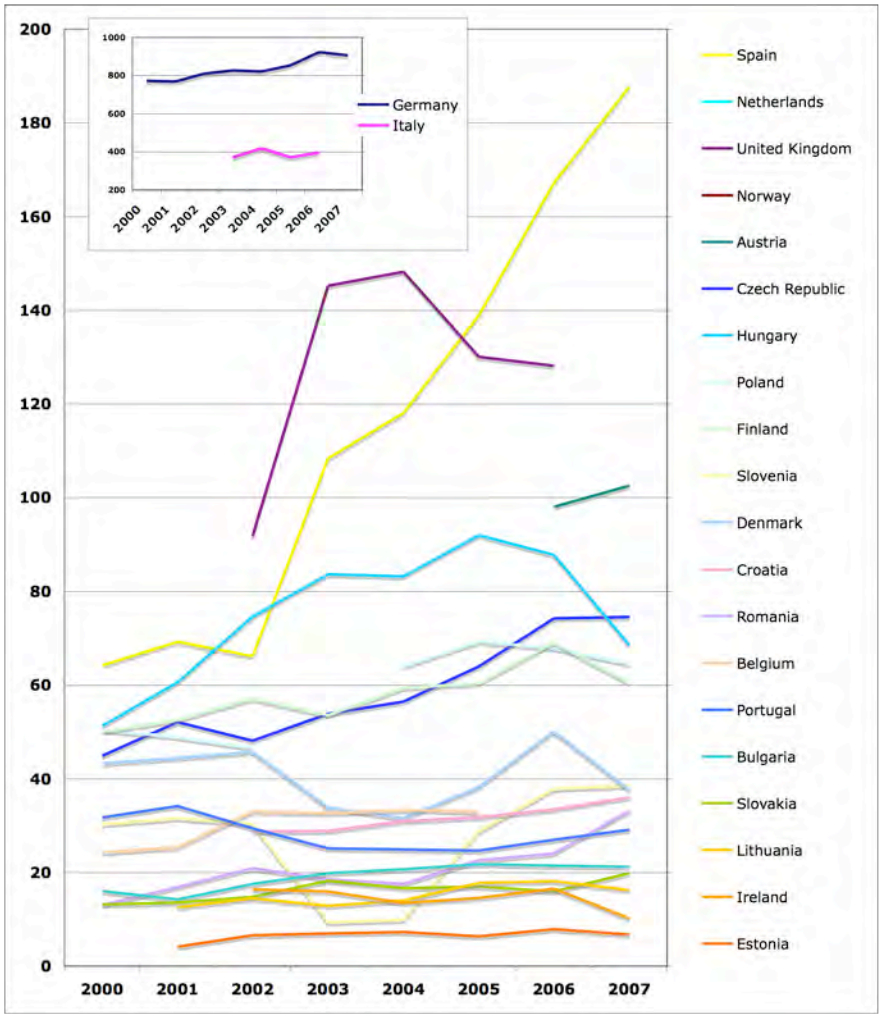
Exhibit 12 SSH expenditure by the higher education sector 2000-2007, in millions of PPS at 2000 prices (1)



Data: Eurostat

Taking the METRIS national data as basis of information, the share of SSH within the university spending varies. While in French universities the SSH share is around 15%, in Germany it is about 21%.

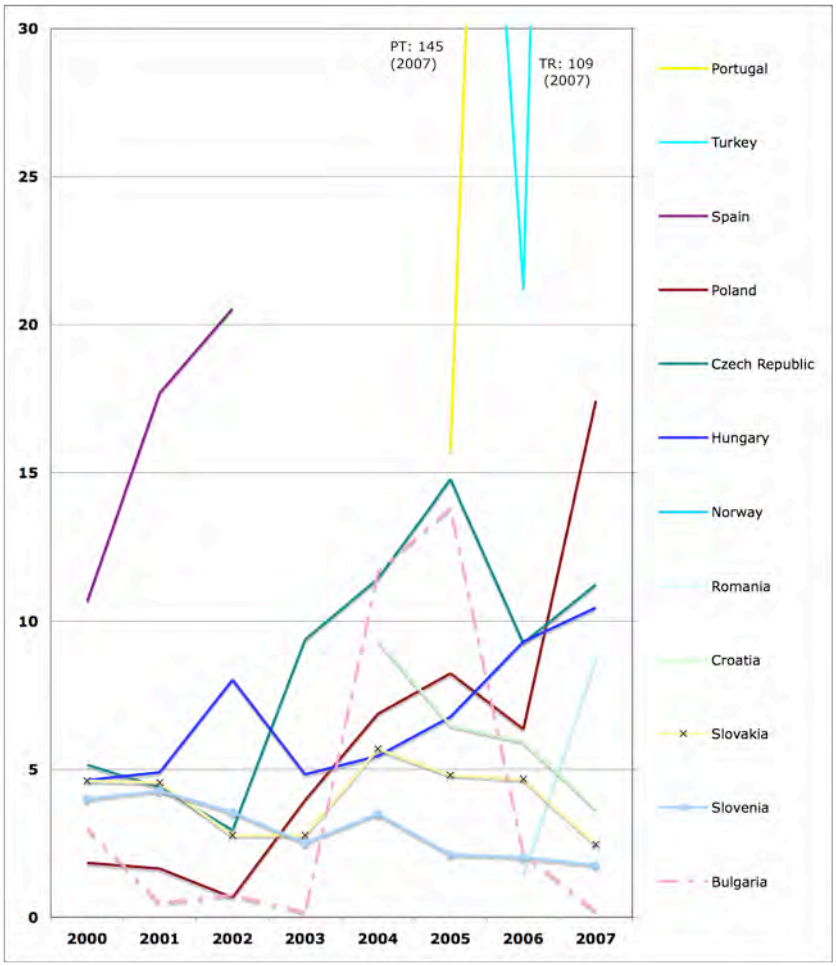
Exhibit 13 SSH expenditure by the government sector 2000-2007, in millions of PPS at 2000 prices (1)



Data: Eurostat

Official Eurostat data as well as the nationally originating data included in the METRIS reports indicate that public research institutes play a much less significant role than the higher education sector. For the largest country Germany, the federal state level allocation to public research institutes is 50% of the budget for universities. For France, 70% goes to the universities, 15% to CNRS institutes and another 15% to other public research institutions. Other than the larger EU15 MS such as Italy, Spain, the UK, or the Netherlands, the sector is relatively strong in those countries where Academies of Sciences exist which are also most likely to maintain dedicated SSH institutes.

Exhibit 14 SSH expenditure by the business sector 2000-2007, in millions of PPS at 2000 prices (1)

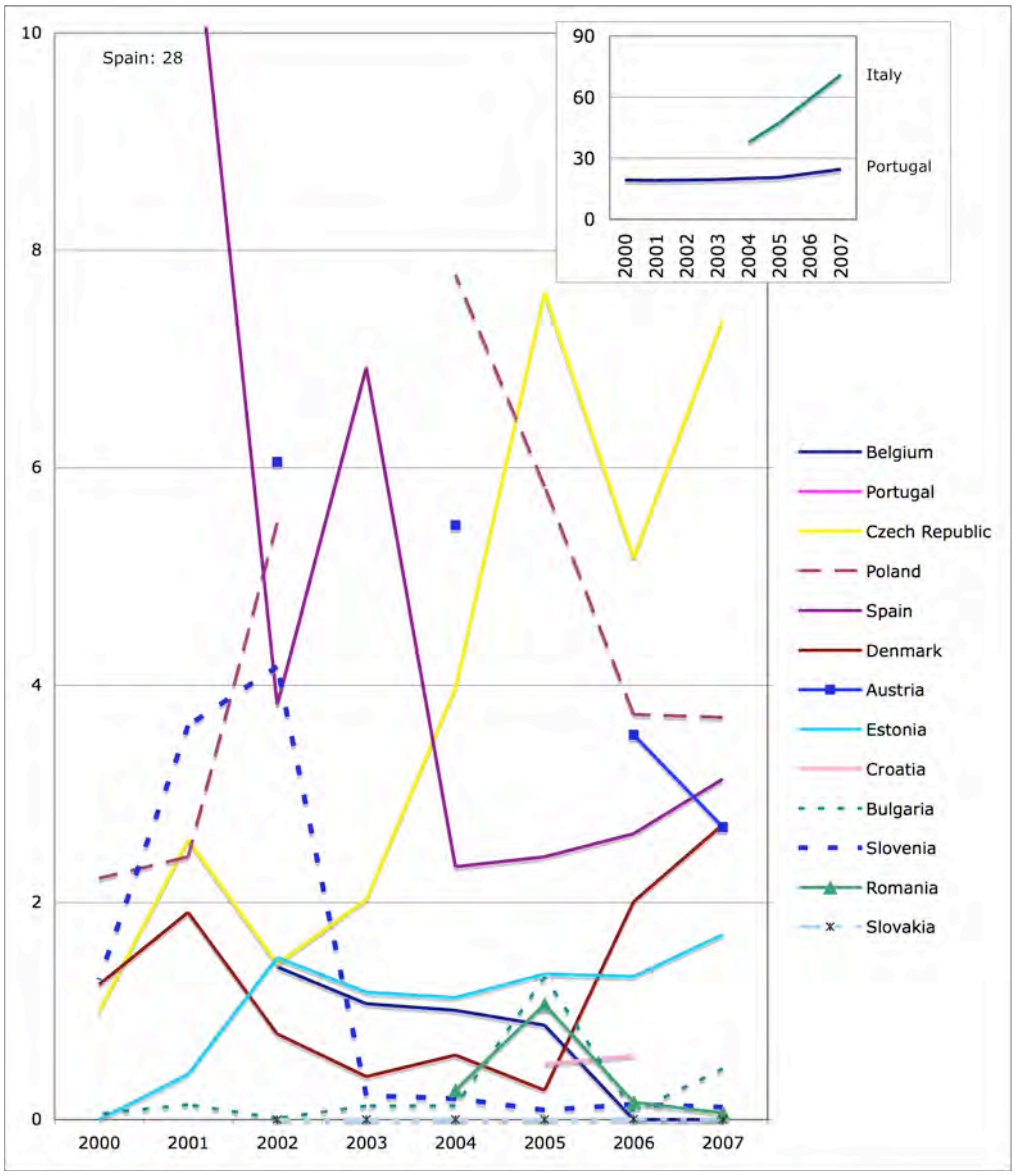


Data: Eurostat

Given that the business sector only marginally funds SSH research, even little changes have quite drastic effects as can be seen from the many ups and down in Exhibit 14.

For this sector, many countries cannot provide any data – most likely because there is (almost) no SSH funding from the business sector. Conceptually it may also be the least feasible combination. Assuming that a business firm has interests and concrete – often immediate - needs, one may ask what a business firm may get from an SSH department which it cannot contract anywhere else?

Exhibit 15 SSH expenditure by the public-non-profit sector 2000-2007, in millions of PPS at 2000 prices (1)



Data: Eurostat

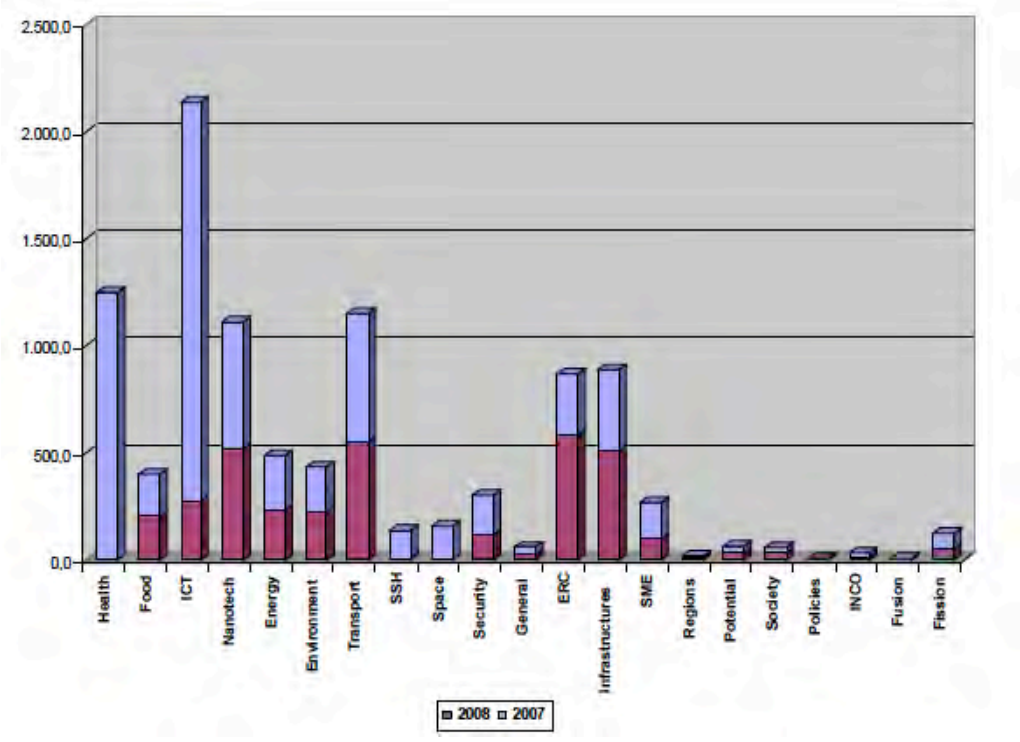
Like the business sector, the public-non-profit sector is a rather unimportant funding sector – however, individual funding may be very important for individual researchers or research teams. As it is so small, there are many variations from one year to the other but these are mainly due to the very low absolute value. Given that the data is only available for a small number of countries, it is difficult to demonstrate a single trend. For several countries displayed above, average annual growth between 2000-2007 was positive in a two-digit range. Similar decreases can be found in Slovakia, Slovenia, Croatia, Norway, and Bulgaria.

4. Internationalisation of SSH

As already noted, due to the societal and economic consequences inherent to many areas of research, including the natural and physical sciences, SSH now forms a pervasive area of research. Moreover, its strong links with a broad range of policy concerns implies that research in SSH has a major role in underpinning policy advice. Since many of these policy concerns are now global in nature, one might anticipate SSH research to demonstrate a high level of internationalisation as researchers in different countries seek to share and compare their investigations into shared problems and issues. Does the information provided in the METRIS reports support this contention?

Before examining the information provided in the METRIS country reports, one indication of the degree of international cooperation occurring in the field of SSH can be derived from figures relating to participation in international programmes such as FP7. The Second FP7 Monitoring Report[3] provides information on the numbers of applicants and amount of Community funding requested in retained proposals for FP7 calls by thematic area for the years 2007 and 2008 (see Exhibits 16 and 17).

Figures 16 Requested Community financial contribution (in million euro) in retained proposals for FP7 calls concluded in 2007 and 2008 by thematic area

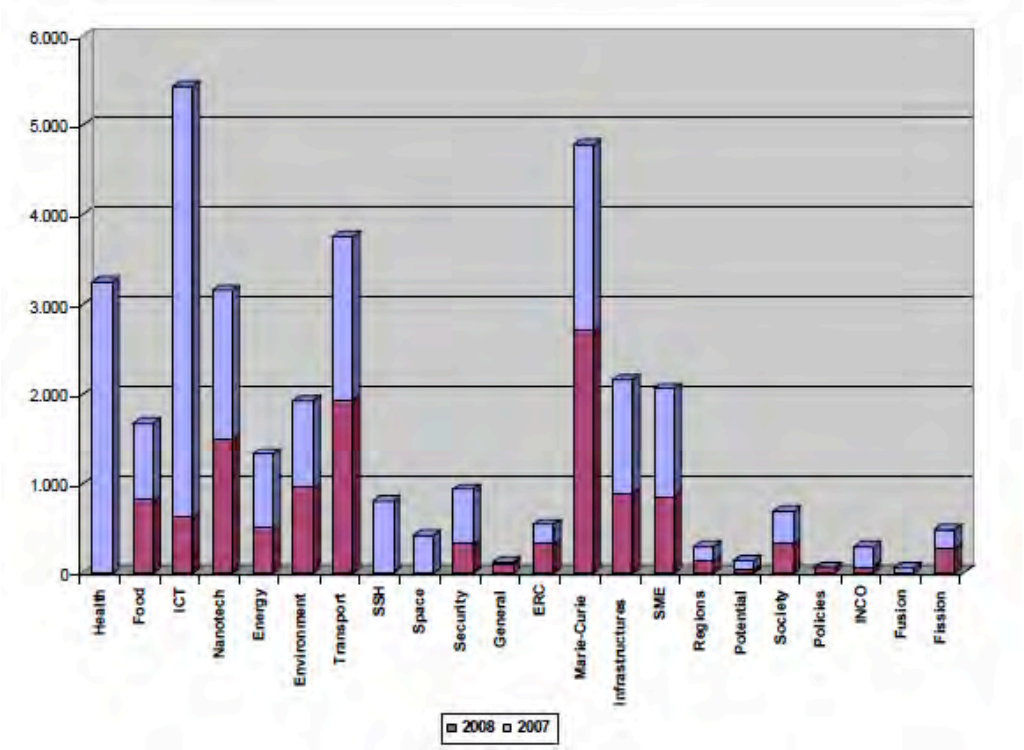


Source: EC, MONITORING REPORT 2008

[3] European Commission Research Directorate-General, Second FP7 Monitoring Report: MONITORING REPORT 2008, 1 October 2009

Applicants in the SSH thematic area comprised around 3.6% (approximately 809) of the total number of applicants within the Specific Programme 'Cooperation' (which accounted for about 66.3% of all retained FP7 applications).

Figures 17 Numbers of applicants of requested Community financial contribution (in million euro) in retained proposals for FP7 calls concluded in 2007 and 2008 by thematic area



Source: EC, MONITORING REPORT 2008

Table 3 provides data on participation by EU Member States, Candidate Countries and Associated Countries in the area of Socio-Economic Sciences and Humanities in FP7 in terms of signed grant agreements. It is clear that the UK and Germany tend to dominate in this area, although these countries are leading participants across all thematic areas of FP7. Thus, it is not possible to discern whether these countries are particularly strong in the SSH area compared to other thematic areas.

Table 3 FP7 Participation and Requested EC Financial Contribution in Signed Grant Agreements by Country: Socio-economic sciences and Humanities

Country	Number of funded projects	EC- Financial contribution
UK - United Kingdom	150	33,593,492
DE - Germany	118	22,505,443
IT - Italy	92	16,618,873
NL - Netherlands	70	15,104,290
FR - France	78	14,160,797
BE - Belgium	62	12,771,887
FI - Finland	28	11,017,672
AT - Austria	38	8,309,813
ES - Spain	48	6,907,447
SE - Sweden	37	6,891,428
DK - Denmark	26	4,075,446
HU - Hungary	36	3,654,118
EL - Greece	13	3,065,447
PL - Poland	23	2,180,018
IE - Ireland	14	1,989,941
SI - Slovenia	19	1,804,309
PT - Portugal	14	1,698,662
BG - Bulgaria	17	1,415,692
CZ - Czech Republic	18	1,379,110
EE - Estonia	14	1,179,263
EU - European Union (JRC)	5	1,034,738
RO - Romania	13	868.994
CY - Cyprus	7	775.568
LT - Lithuania	8	656.677
SK - Slovakia	6	642.3
MT - Malta	8	593.738
LV - Latvia	4	212.621
LU - Luxembourg	1	30.014
Total for Member States	967	175,137,798
TR - Turkey	13	1,128,317
HR - Croatia	3	144.384
MK - FYR of Macedonia	1	84.24
Total for Candidate Countries	17	1,356,941
NO - Norway	19	3,050,066
CH - Switzerland	11	2,122,992
IL - Israel	7	960.846
IS - Iceland	4	654.931
FO - Faroe Islands	1	44.833
RS - Serbia	2	21.596
BA - Bosnia and Herzegovina	1	10.176
AL - Albania	1	8.346
ME - Montenegro	1	8.346
Total for Associated Countries	47	6,882,132

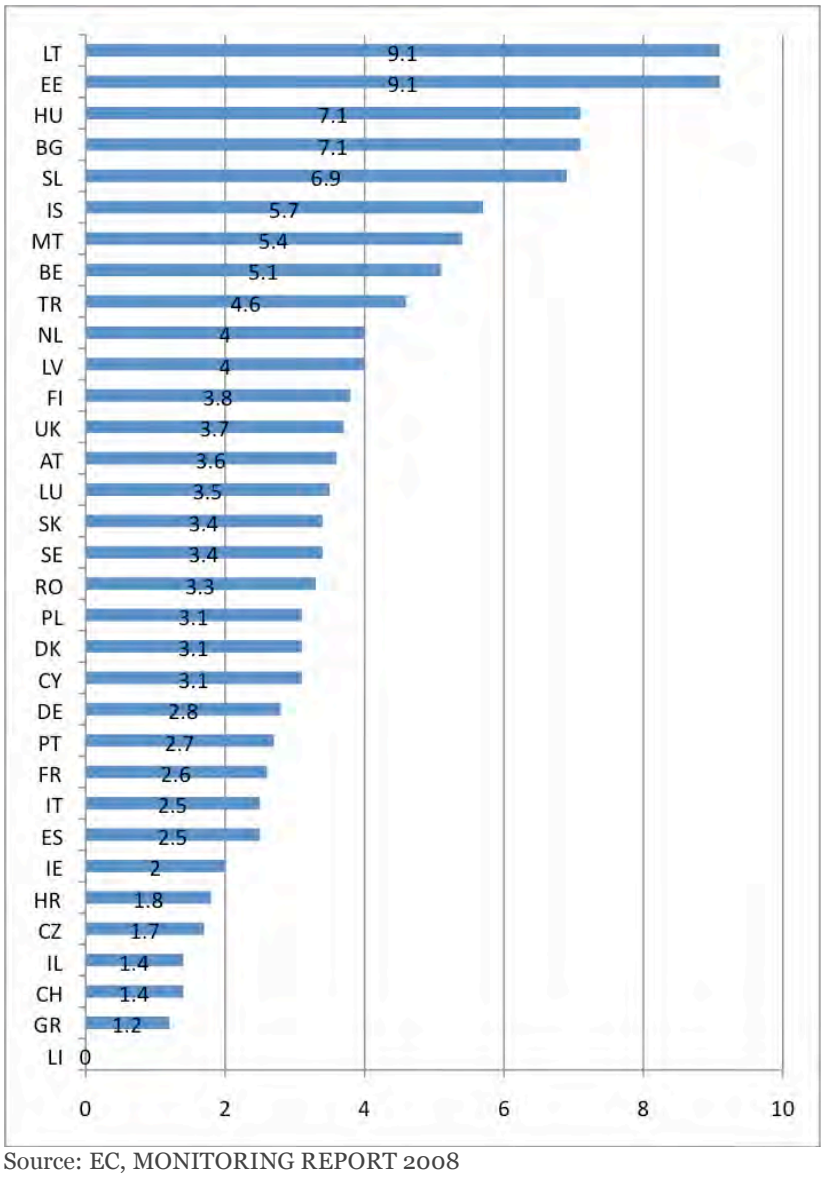
Source: EC, MONITORING REPORT 2008
Compilation: Technopolis

A better indication is provided by an analysis of the information provided in the 2008 Annual Report for FP7. This report presents data on FP7 grant holders by country of origin in 2008. It also lists number of participations so it is possible to gain a better

picture of the number of researchers involved from each country. The data presented in Exhibit 18 show numbers of SSH participants as a proportion of the total number of participants per country.

Here a different picture can be observed, with several of the new Member States from Eastern Europe (Lithuania, Estonia, Hungary, Bulgaria and Slovenia) demonstrating a much higher proportion of researchers in the SSH area. However, whether this is indicative of a comparative strength in SSH or a weakness in other thematic areas in the natural and physical sciences is not clear.

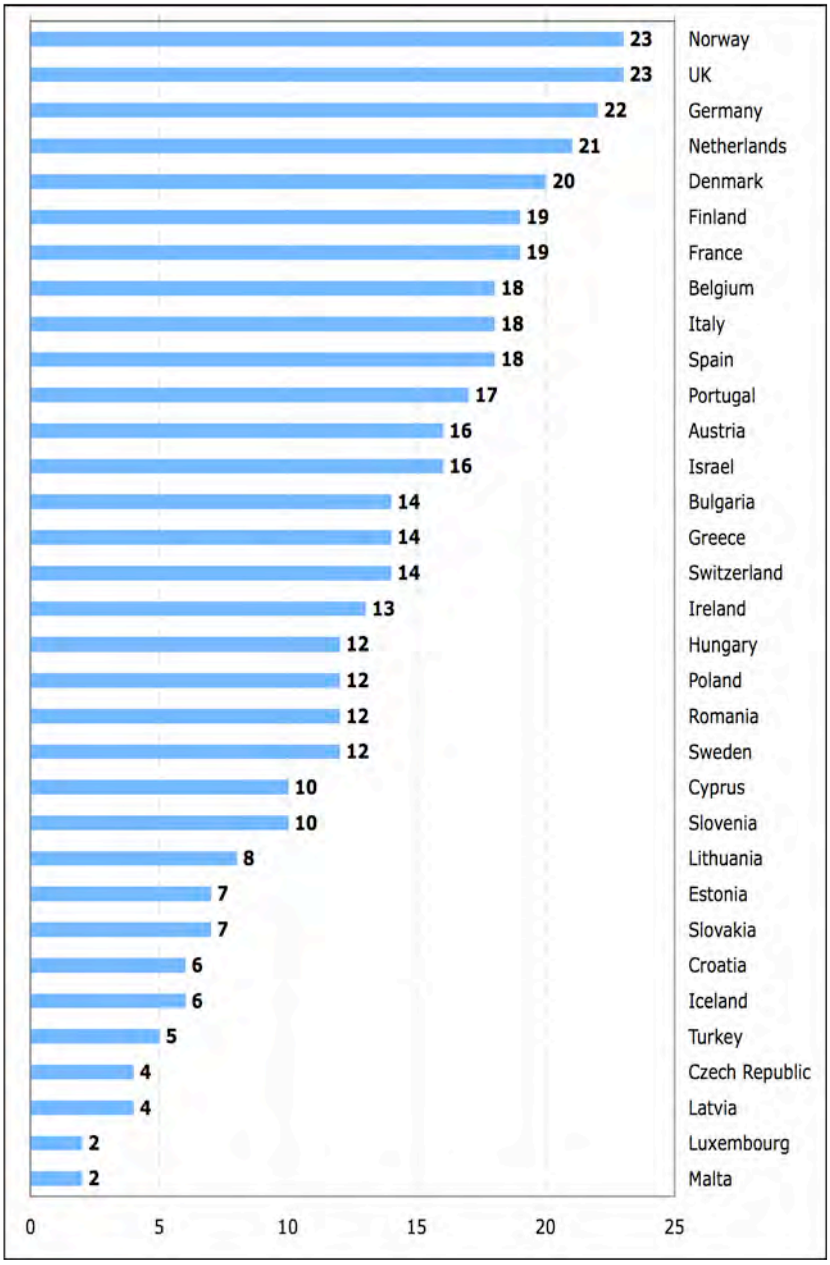
Exhibit 18 Proportion of FP7 participants in thematic area Social Sciences and Humanities as percentage of total participants by country.



Source: EC, MONITORING REPORT 2008

Turning to another European research cooperation programme, Exhibit 19 shows the participation in COST Actions under the domain of 'Individuals, Societies, Cultures and Health' (ISCH), which has the strongest link with the SSH area.

Exhibit 19 Participation in COST Actions under the domain 'Individuals, Societies, Cultures and Health', 2010



Source: COST, 2010

From the 23 Actions listed in the 2010 document "About COST"[4], the countries with the highest level of participation are Norway and the UK (which participate in all 23

[4] See http://www.cost.esf.org/about_cost

listed Actions) followed by Germany (22), the Netherlands (21) and Denmark. Interestingly, countries such as Portugal and Israel have high participation rates. Given the size of these countries it is possible that this may imply something regarding the importance accorded to SSH research in these countries.

To place these figures in the overall context of COST, in 2008 a total of 238 Actions were running at some point. During the same year, 24 (10%) of these Actions were in the ISCH Domain. Thus SSH activities seem to have a larger proportion of the overall COST budget than is the case in FP7.

While the data from COST offers a more detailed appreciation of the extent of different countries' participation in international SSH research activities, it is still limited. Thus, further analysis was conducted using the METRIS Country Reports. The most relevant sections of the current set of reports are those relating to the 'Relevance of European SSH research' and 'International cooperation'. However, these two sections are often conflated, with European research cooperation being generally viewed as a subset of international research cooperation. The main distinction between the information presented in the two sections is that the latter tends to focus to a greater extent on coverage of cooperation with non-European countries.

With regard to the first of these sets of information, several countries note that European level SSH research is very important for many of their national institutions and participation in initiatives such as the Framework Programmes forms a major national goal. Indeed, most countries covered by METRIS, both Member States and Associated Countries, tend to benchmark the relevance of European research primarily through their level of participation in the Framework Programmes. Hence, countries with a high level of participation, particularly where their nationals have a coordinating role, report this as an achievement, whilst 'low' participation is seen as a negative outcome, although few countries appear to have targets against which the level of participation may be benchmarked: an exception is Ireland where the Irish government set a target of €400m for Irish researchers (across all disciplines) in FP7. In addition, several of the new Member States note that increasing FP participation is a policy target, whilst the rate of return on investment in EU participation is also a policy issue (for example, in Croatia).

Increases in the rate of participation between successive Framework Programmes are also viewed as a positive achievement. Interestingly, some countries report that there is no systematic or specific impact assessment or evaluation of SSH research – thus benchmarking the participation of national researchers in European initiatives seems to form a proxy performance indicator. Alongside participation, the success rate in gaining funding under the FPs is also frequently cited as an indicator of performance. To a similar extent, participation in COST actions, ERA-Nets and ERC projects is also regarded as a benchmark of national performance.

Countries with small SSH research communities may find it difficult to participate in large numbers of European initiatives as they lack competence in certain areas. The Swiss Country Report states that Swiss SSH researchers tend to participate less frequently in European initiatives than their counterparts in other disciplines: one postulated reason is that Swiss SSH research is of lower quality than other disciplines, although other explanations are possible. On the other hand, participation is also seen as a means to develop critical mass or to raise the standard of national research capacity. The following extract from the Hungary Country Report exemplifies the relationship between national and European SSH research:

> "*EU SSH research is highly relevant for participating Hungarian research performers. Though these programmes do not always coincide with Hungarian [*research priorities*], participation is considered crucially important because… it offers networking possibilities; provides funding; and through access to new ideas it enables Hungarian researchers to align local research priorities with European ones*."

Exceptions to the focus on European research programmes noted above can be found in the Nordic countries where, although participation in the Framework Programme, COST and ERC projects are seen as valuable, an alternative collaborative network exists in the SSH mediated by the Joint Committee for Nordic Research Councils for the Humanities and the Social Sciences (NOS-HS). Language can also form an important stimulus to international cooperation: Portugal has a series of agreements with Portuguese speaking countries, whilst Spain has strong research links with Latin American countries, although neither of these sets of links is specifically focused on SSH. The Country Report for Croatia also cites the following as having a strong influence on national SSH research: the European Values Study, the European Social Survey, the World Value Survey and the International Social Survey Programme.

A second general point to emerge is that the participation data, particularly that for SSH-related research, is highly disaggregated. Thus, whilst the data presented on a country by country basis is often very information rich, this richness is heterogeneous and fails to present an overall comprehensive picture of the level of international research cooperation across Europe as a whole. Thus one is dependent on centrally collected data such as that produced by CORDA or COST. A conclusion is that the structure of the METRIS initiative (which views Europe through separate lenses focused on "national systems") is not conducive to reporting on international cooperation: while there is a benefit in taking a national perspective there is also a need for a dedicated information structure to provide a composite picture of European SSH cooperation patterns.

As might be expected, universities form the major participants in both European and wider SSH research cooperation, followed by research centres, public research organisations and, at a much lower level, private organisations and firms. Some minor variations to this pattern may be seen as a result of the specific national composition of the research performing system but the general rule seems to hold for most countries. However, it must be noted that the reported patterns of cooperation only reflect the available data on cooperation – a substantial proportion of cooperative activity will only concern individual researchers and is unlikely to be captured other than by proxy measures such as co-publication data. Nevertheless, it is still probably safe to assume that the majority of these researchers will still be located in universities.

International cooperation (as distinct from participation in EU initiatives) is prevalent amongst all the countries covered. However, it spans a range of activities that may be moderated and implemented by a diverse set of actors including ministries, academies and learned societies (which may be SSH specific or more generic), dedicated research agencies and councils, institutions (notably HEIs), research groups and individuals. Data on inter-ministerial and inter-academy collaborative arrangements, or linkages between research councils in different countries, are frequently reported but tend to take the form of memoranda of understanding or multi-lateral and bilateral agreements which are often generic to all research fields and may encompass a diverse set of activities from educational programmes, development projects through to research programmes. In some cases, governmental-level agreements are not implemented at the operational level, thus it is meaningless to use them as an indicator. Although some of the arrangements noted above are specific to SSH-related research, development of a comprehensive picture is not possible.

Similarly, a large number of examples of support schemes aimed at promoting research collaboration are also listed. Again, some are specific to certain countries or groups of countries, whilst others are more general. Also as above, many of these schemes tend to be broadly oriented towards science and technology rather than SSH-focused.

While country reports list sets of countries with which generic or SSH-specific agreements and arrangements have been made, this has not been done systematically and, as stated above, the nature of these relationships is often quite diverse.

The level of data availability also varies greatly between countries: some report that no details are available regarding SSH-related research cooperation, while others are able to produce detailed information: for example, the Country Report for Slovakia states that in 2007, there were 8,079 examples of outward mobility (principally connected with conference and workshop trips) of which 606 were in the Social Sciences and 419 in Humanities. In the same period, 2,859 foreign researchers visited Slovakia of which 226 were in the Social sciences and 109 in the Humanities. Thus, SSH generated around 12.7% and 11.7% of total outward and inward mobility flows respectively.

The clear message to emerge from this particular analysis is that the information provided can be extremely detailed and rich but it is not presented in a systematic framework. Thus, the production of an overall picture of cooperation in the SSH will require the definition of a clear set of parameters and variables. It may be necessary to restrict such a study to a few levels of aggregation as the scale of cooperation activities is enormous – for example, the Swedish Country Report notes that Lund University holds bilateral agreements with 600 universities around the world: scores of other European universities can be expected to demonstrate equally high levels of cooperation activity.

5. Commonalities and diversity

5.1 Priorities

Clear-cut priorities for SSH research cannot be identified for all countries monitored within the METRIS framework. In particular in the social sciences bottom up procedures are followed when defining research themes. In some countries SSH priorities were only recently made more explicit. Thus, priorities can now be clearly deduced in some countries from official planning and policy documents. This is for instance the case in Austria, where SSH priorities are defined in the governmental programme ("Regierungsprogramm") 2008-2013, while in Croatia they are outlined in the "Science & Technology Policy of the Republic of Croatia 2006-2010". In Greece since 2007 they are included in the Strategic Development Plan for Research, Technology and Innovation for the period 2007-2013. In Lithuania research priorities are approved by the government in the Programme for National Research Priorities. The priorities identified in Lithuania follow clearly the topics given in the EU's Seventh Framework Programme. In the Netherlands in 2005 two out of five emerging key-areas which were defined and adopted by the government, are SSH relevant. In Poland, Romania, and Slovenia SSH relevant priorities are contained in the National Programmes which define research priorities in general.

In other cases SSH priorities are defined by the bodies mainly responsible for research funding e.g. in the United Kingdom the various research councils, in Denmark by the Danish Council for Strategic Research in its catalogue of research priorities "Research 2015 – A Basis for Prioritisation of Strategic Research", in Finland the Academy of Finland and TEKES, the Finish funding agency for technology and innovation define their own priorities. In France competencies for SSH research are split among a variety of actors ranging from ministries via the National Agency for Research (ANR) to research organisations (e.g. CNRS, INRA, INED, IRD) each of them being responsible for setting its own agenda. In these institutions most often a rather bottom up procedure is followed and thus, the definition of national priorities is hardly possible. There are signs of gradual change: in France for example, the situation is changing. In 2009 the National Strategy for Research and Innovation (SNRI) was launched, stating that SSH is an integral part of the defined research priorities. The definition of explicit priorities has however yet to be accomplished.

In Germany, the Federal Ministry of Education and Research (BMBF) the main funding body for SSH related research, defines seven key areas. Other funding organisations (DFG, charities) follow their own agenda, not necessarily pursuing specific priorities but allowing for bottom up definition of topics dealt with.

In Italy also a mixed model for the definition of priorities can be found. While the National Research Programme (PNR) included priorities named among others by the Ministry of Social Policies and the Ministry of Cultural Heritage which are of relevance for the SSH, the Research Programme of relevant national concern (PRIN) supported by the Ministry of Universities and Research again uses a bottom up approach. SSH relevant projects are funded under rather general headings labelling scientific disciplines.

Difficulties in identifying priorities exist also in Ireland and Turkey. SSH research here is included in rather general and cross cutting activities again, using a bottom up model to define the research that is being carried out. The bottom up model is also used in Israel, Belgium, the Czech Republic and Switzerland.

Identified thematic priorities, which are addressed and pursued by SSH research are often linked to more general and cross cutting issues with societal relevance. Societal developments are taken up and transformed into research issues. Not surprisingly a

number of topics are pursued by various countries, even though the exact wording of formulation might differ between them.

The following overarching topics are mentioned as relevant priorities to be tackled by SSH:

Relevant **societal trends** that are taken up concern:

- *Demographic developments* and its impact on the society are mentioned as relevant in particular in Austria, Croatia, France, Germany, and the United Kingdom. Relevant in this context are also the topics dealing with *Social Security Systems / Welfare / Health Systems / Public Health*. These topics are tackled by Finland, Greece, Hungary, Netherlands and Norway. Switzerland focuses in addition on issues of intergenerational relationships.
- *Social inclusion / exclusion or social cohesion* is another relevant area for a range of countries and at least partly related to the issues just named. Countries addressing this priority are in particular: Belgium, Greece, Israel Portugal, Romania, Slovakia, Slovenia, Switzerland and the United Kingdom. *Migration* is another closely related topic in this context. In Norway, Turkey and the United Kingdom it is among the SSH priorities. Also on the agenda are *Gender* issues, in particular in Norway, Portugal and Switzerland. On the Swiss list of priorities in the SSH are a couple of topics not explicitly mentioned by other countries. These are: religion and the state as well as right-wing extremism.
- Among the priorities are other topics linked to questions that concern everyday life. In particular: *life and lifestyle*, researched in Denmark, Germany, Slovakia and the United Kingdom. Closely related to this issue is *working life and health and the quality of life* that is in particular followed by Finland, France, Germany, Norway, Slovakia, Turkey and the United Kingdom.
- The principles and functioning of *modern societies* is a priority in Croatia, Denmark, Germany, Greece, Poland and Romania. Additional topics, which are closely related, are s*tate effectiveness and modern democratic developments*, followed by Croatia, Slovenia and Sweden; *governance and its new forms*, dealt with in Belgium, Croatia, Germany, Lithuania, Spain, Turkey and the United Kingdom; the civil society and issues of citizenship were mentioned among their SSH priorities by Portugal, Greece and the United Kingdom. *New social categories* are relevant in Turkey.
- Various topics were mentioned as being priorities ranging around the issues *socio-economic development and growth* – at this rather highly aggregated level named as a priority by: Croatia, Germany, Greece, Poland, Spain and the United Kingdom. In Hungary and Italy the focus is more specifically directed towards the topic *labour market and unemployment*. *Innovation and competitiveness* relate to another subset of issues feeding into the more general topic of economic development, a topic that is on the research agenda in Denmark, Hungary, Poland, Portugal and Romania. Another closely linked area concerns the *development of the knowledge and information society*, which is a priority in Belgium, Denmark, France, Hungary, Ireland, Lithuania, Turkey and the United Kingdom. Another highly relevant area in this context prioritized by a range of countries concerns *education / learning / training / skills and knowledge creation*. This is high up on the agenda in: Croatia, Denmark, Estonia, France, Germany, Greece, Hungary, Israel, the Netherlands, Portugal, Romania, Spain and the United Kingdom.
- Socio-economic development and growth with specific focus on sustainability issues is another priority in European SSH research. The *environment and issues of sustainability* are among research priorities in Austria, Denmark, France, Germany, Poland, Portugal and the United Kingdom. In addition *climate change* is in particular being tackled by Austria, Turkey and the United Kingdom.

- The environment is also of relevance in a slightly different context. Issues of *natural and cultural heritage* are among the priorities in Croatia, Greece, Italy, Romania, Slovakia, Slovenia, Spain and the United Kingdom.
- Particularly in the new member states, *cultural, national and regional identity* is valued highly. These issues are mentioned by Croatia, Lithuania, Poland and Slovenia. In addition *language and linguistic*, and thus, related and very specific aspects of this topic, are highly relevant again in Croatia, the Czech Republic, Estonia, Lithuania, Romania and Slovenia but also in Sweden and Switzerland.
- On the other hand *Europeanization / internationalization / globalization and their impacts* and consequences to the various spheres are explicitly mentioned among SSH priorities by Denmark, Italy, Poland and the United Kingdom.
- Taking up another highly relevant societal issue of *security and safety* is a defined priority in France, Greece, Israel, the Netherlands, Poland, Slovakia and the United Kingdom.
- Carrying out SSH research also requires a *specific infrastructure*. Thus, the development and provision of an adequate ICT and SSH infrastructure is among the priorities named by Austria, Belgium, Finland, France, Germany, Ireland, Poland, Spain and the United Kingdom.

5.2 Programmes

Be it at the national level or by individual funding agencies or institutions defined thematic priorities are as a rule made explicit via the formulation of specific programmes.

In some countries, however, SSH topics are seen as an integral part of more general or cross cutting programmes and thus, not specifically translated into thematic SSH programmes.

As a consequence, thematic programmes might be either wide ranging or focussing on specific SSH relevant topics or even more specific - sub-topics. Apart from these thematic programmes non-thematic programmes are also implemented. These might either focus on measures providing funding for individual researchers e.g., Ph.D. scholarships, funding schemes for Post docs, research fellowships, or on structuring measures such as providing funding to set up specific infrastructures of institutions e.g., centres of excellence or competence. Quite a number of countries apply a mix of thematic and non-thematic programmes. In addition, a number of instruments are applied, ranging from institutional and project funding to funding of individuals via various grant schemes, which are addressing researchers at various career levels.

Specific SSH programmes initiated by different funding organisations exist for example in Austria. Here, the Austrian Ministry of Science and Research, the Wissenschaftsfond (FWF) and regional funding organisations created specific programmes. Also in Finland specific SSH programmes are implemented, in particular by the Academy of Finland. Norway too has a number of SSH specific programmes. While most of them are implemented by the Norwegian Research Council, funding is provided by various ministries - depending on the topic with which the individual programme is dealing. Apart from thematic programmes Norway also runs a Centre of excellence programme. Three of the centres funded belong to the SSH domain. In addition SSH is also funded in the framework of more general programmes such as the Environment programme or the Health and Care Services Programme of the Climate Change and impacts programme. In Sweden SSH specific programmes are run by the Swedish Council for Working Life and Social Research focussing on the establishment of centres of excellence within universities. So far 10 such centres are being funded. Project funding specifically aimed at enhancing research collaboration in the SSH, in particular between researchers in new HEIs and industry, is provided by the Knowledge Foundation within the framework of the programme “Increased co-production competence”. Institutional funding was provided by the STINT and the

Riksbankens Jubileumsfond to establish the Swedish School for Advanced Pacific Studies. By providing funds for PhD students and Post-Docs, research and training are to be improved. Individual funding in particular for Post-Docs is also provided to other SSH relevant institutions, again made available by the Riksbankens Jubileumsfond, here together with the Royal Swedish Academy of Letters, History and Antiques.

In Slovakia only one programme "Current Issues in Social Development" specifically devoted to the SSH is currently active. Since 2003 a total of 10 research programmes were implemented by the Ministry of Education, some of them already expired. Among them two were SSH relevant including the one which is still active. In Turkey also there is only one programme focussing on SSH. However, thematically the SSH Research Support Programme, a sub-programme of the countries Scientific and Technological Research Project Support Programme, covers all SSH relevant topics. Three calls are launched every year, and while any research institution can submit proposals, the majority of the funding goes to the universities.

In France the department for SSH of the ANR runs a number of SSH specific research programmes. Funding is distributed based on calls, most of them being open for universities and other HEI and CNRS institutes. In addition funding is provided via the interdisciplinary programmes launched by CNRS.

In Germany a number of SSH specific programmes are implemented by the Federal ministry of Research and Education (BMBF), thus, transforming the priorities defined by the ministry into concrete action. Project funding is provided in particular based on specific calls. In addition, funding is provided by the DFG, either as project funding or as funding for individual researchers or as structural funding for setting up research groups. It might be provided in the context of thematic areas but also non-thematically. In addition a number of charities also provide funding for SSH.

In the United Kingdom a variety of specific SSH programmes exist. Mostly they are implemented by either the ESRC or the AHRC. In addition cross-council initiatives e.g. collaborative programmes implemented commonly by ESRC and AHRC also exist. Similarly – and depending on the topic – there are programmes run in collaboration with other research councils and agencies such as the 'Living with Environmental Change' Programme run by the Natural Environment Research Council with AHRY, the ESRC and other participating partners. Project funding is as a rule distributed competitively, various instruments – small grants and large grants are applied. In addition institutional funding is also made available e.g. for the Innovation research centre, collaboratively funded by various councils and agencies. The centre provides expertise and generates knowledge addressing in particular policy makers and practitioners.

In Belgium SSH is mainly funded via institutional funding provided to the universities. Apart from this there are hardly any SSH specific measures. Measures implemented either at the federal, the community or the regional level are mainly targeting policy relevant issues and thus providing input to policymaking.

The situation is similar in the Czech Republic where the main funding is provided through institutional funding to the universities. In addition competitive project funding is provided following bottom up definition of research topics. Various rather broad funding programmes are implemented. In addition, however, programmes addressing various cultural and heritage aspects exist.

In Croatia funding for SSH research is provided in the framework of the country's "Research Projects" programmes, which contains sub-sections focussing on the social sciences and on the humanities. Funding is distributed competitively. In addition, a programme supporting the implementation of the Higher education reform (Bologna process) was initiated by the National Foundation of Science.

In Greece, SSH is covered by a framework of programmes with a more general focus. Project funding is provided as well as individual funding, in particular in form of PhD

scholarships. The different programmes address different target groups ranging from universities via research institutes to enterprises. Collaboration between the various actors is also funded.

In Portugal programmes do exist under the headings of the Structural Funds earmarking for R&D –with a rather general orientation (Operational Programme for Competitiveness Factors, Human Potential Operational Programme; Operational Programme Science and Innovation). Thematic lines addressing specific SSH topics are defined or topics are defined around societal problems; these themes are also open for SSH. The 'Human Potential' Operational Programme does define specific thematic areas such as Citizenship, Inclusion and Social Development or Gender Equality, and also offers 'Advanced Training' Programmes specifically addressing graduates and doctorates.

Ireland implemented non-specific programmes which are defined via the instruments used rather than thematically. Different programmes, covering all stages of an academic career ranging from post-graduates via Post-Docs to senior researchers, do exist. In addition, project funding is provided in the framework of the 'Government of Ireland Research Project Grants' and the 'Programme for Research in Third Level Institutions'. Israel also does not provide funding via SSH specific programmes. In Italy too, funding is primarily distributed following a bottom-up approach in the framework of rather general overarching programmes such as the FIRB programmes, however, SSH specific calls are launched. The National Operative Programme 'Scientific Research, Technological Development, Higher Education' also offered funding for professional qualification specifically for personnel in public administration in R&D relevant areas. A SSH specific programme was implemented at the regional level, by the Regione Piemonte. This programme was specifically devoted to early career researchers.

In Slovenia research funding is provided by the Slovenia Research Agency, however, no programmes specifically dedicated to the SSH exist. Funds provided are contained in broader programmes such as the research groups programme. Resources are distributed using a bottom-up approach.

The situation is similar in Switzerland. Funding is provided via two large programmes, which are not specifically devoted to the SSH: the National Research Programme and the National Centres of Competence Programme. Funding is distributed primarily following a bottom-up approach while only a minor share is distributed according to thematic priorities. Six centres are funded in SSH via the 'National Centres of Competence' Programme. To reach this number, however, a specific call was launched while the first, open call led only to the selection of one SSH centre (out of 14). Following the outcry of the SSH community a call, specifically devoted to the SSH was eventually launched.

The most important funding programme in Romania is the National Plan for Research, development and Innovation. SSH is included in three out of six programmes. The programme is organised according to the issues addressed. It follows a similar structure (Ideas, Partnership, Capacities are the three programmes also relevant for SSH). Within those programmes thematic areas are defined. In addition, a programme providing funding for Centres of excellence is run by the National University Research Council. Among the 40 centres funded in total 6 belong to the SSH.

Poland follows a strict bottom up definition of research themes. While priorities are outlined in the country's overarching "National Programme for Scientific Research and Development", no funds are allocated to the defined priorities. Up to now, individual researchers apply for funding to the Ministry of Higher Education twice a year. The ministry also offers a programme specifically addressing post-doctoral researchers. In addition the Foundation for Polish Science offers some programmes, where resources are also distributed on a competitive basis. These provide e.g.

academic grants for professors as well as funding for the publication of books in the SSH.

In Denmark SSH research is funded by means of various instruments. Research project and strategic alliances, in particular are funded within the framework of either specific or non-specific programmes. Within the programme "creativity and innovation" two SSH relevant sections are explicitly defined. In addition, a programme focussing on education and competence building was implemented. Funding for individual researchers is provided by the Danish Councils for Independent Research for Social Sciences and Humanities.

In Hungary, there are various SSH specific and non-specific programmes, run by different agencies. SSH relevant projects are funded within the non-specific "Strategic Research Programme", a two-year programme funded by the Office of the Prime Minister. The "The social implications of innovation" programme is SSH specific as is the OTKA SSH Research programme. The latter also provides individual funding.

In the Netherlands following the definition of five "emerging key areas" by the Innovatie Platform of which two are SSH relevant, a programme is being developed by the Netspar and Holland Financial Centre for one of these two areas, "Pension and Social Security". In addition institutional funding is provided to two so-called Societal Top Institutes (in total three such institutes are funded). In addition SSH funding is provided by thematic programmes implemented by the Netherlands Organisation for Scientific Research (NOW), which provides funding to the Dutch universities. While some of the interdisciplinary programmes are SSH relevant, there are also some programmes specifically targeting SSH, (Contested Democracy, Cultural Dynamics, Continuous Access to Cultural Heritage). Apart from the thematic differences they also target different groups. The first two particularly address groups around senior researchers; the latter is also open to teams built around Post-Docs.

5.2.1 Distinctively national

SSH research, whether implemented via specific SSH programmes or as part of a rather overarching cross-cutting programme often attempts to take up specific issues of societal relevance in individual countries. Thus, as a rule there is a national context. This research is embedded, as is the case for example in the Croatian programme on higher education. This programme aims at providing support to the reforms of the higher education system in Croatia following the requirements of the Bologna reform. In this sense, the programme is on the one hand internationally inspired, but on the other hand it is distinctively national as national conditions need to be taken into account. Similar examples could be cited in other areas: National identity is also taken up by international programmes, but this topic is clearly nationally distinctive. It is followed in particular by the new Central-Eastern Member States. These countries defined and implemented a number of specific programmes tackling cultural and heritage issues. They include research in the area of language and linguistics (as for instance in Estonia and Lithuania), and are thus very national or regional in focus.

5.2.2 Internationally inspired

Quite a number of topics dealt with at national level can also be found among the priorities defined e.g. in the EU Framework programme. However, these often rather general headings are translated into country specific programmes and projects which take into account national specificities. Perhaps the most extreme example of the adaptation of international research priorities into national research priorities can be found in Lithuania. Lithuania defined its own priorities according to the priorities set out in FP6. Following the topics outlined there, Lithuania also covers two SSH relevant areas – Citizens and Governance in the Knowledge-based Society and Preservation of National Identity in the Face of Globalization. These priorities were translated into specific programmes and are implemented by the Research Council of Lithuania.

5.2.3 Up for joint programming?

In a number of countries research programmes which go beyond the national borders exist. This is the case for instance in the Nordic Countries. In the SSH area a Nordic centres of excellence programme for the humanities and the social sciences was set up.

Bilateral programmes, also specifically devoted to SSH exist between Germany and various European and non-European countries. In Germany these are run by the by the DFG. Joint programmes specifically devoted to SSH are pursued with France (ANR) and the United Kingdom (AHRC and ESRC). Collaborative programmes also exist with the USA, India and Russia.

5.3 The role of evaluation

5.3.1 Differing understanding and practices

While evaluation is being implemented as a policy tool in the majority of the countries analyzed, significant differences can be found concerning the extent of its implementation, the methods used and the impact that follows. Evaluations are carried out at different levels ranging from project evaluation, in particular ex-ante evaluations as a basis for funding decisions, programme evaluation, institutional evaluation, evaluation of individual researchers, and systems evaluations.

While the number of evaluations carried out is generally growing and evaluation activities are being intensified, so far in most countries there is no systematic approach to evaluations. Instead, the development of coherent systems is still in process. Well established evaluation cultures already exist in some countries such as Austria, the Netherlands, the United Kingdom, Finland, Spain, Sweden and Norway. Other countries are still developing and adjusting their procedures, and defining responsibilities and methodologies. In the new member countries in particular, significant efforts to establish evaluation procedures are being undertaken.

Systemic evaluations are carried out by a minority of countries e.g. recently in Austria and Slovenia, Slovakia, in Ireland (with special focus on the higher educational system) and in Germany.

Institutional evaluations are more commonly implemented than is the case for programme evaluations.

Obligatory evaluations tend to be the exception rather than the rule. If evaluations are carried out systematically or are even obligatory this - as a rule - concerns institutional evaluations (e.g. universities in Austria, Institutes of the Leibniz Association in Germany, major research centres in Flanders) rather than programme evaluations.

However, there are no specific procedures or regulations concerning evaluations in SSH. Evaluations in these fields are dealt with as is the case for any other field. This means that they are covered by institutional evaluations e.g. when universities are being evaluated and SSH programmes are being evaluated as are other research programmes. Variations, however, can be found concerning the methodologies and procedures applied, but this is also true of evaluations in other fields. Recently, evaluation methodologies have been increasingly discussed. This applies for instance to the selection of suitable indicators to reflect SSH activities. International / European initiatives are also worth mentioning here - e.g. an initiative under the auspices of the European Science Foundation funded by four research funding agencies (ANR, DFG, ESRC and NOW) “Towards a Bibliometric Database for the Social Sciences and Humanities”.

Universities or higher education institutions are increasingly subject to assessments and evaluations. As higher education institutions are the most important actors performing SSH research in most countries, SSH are also increasingly subject to these exercises. In some countries such as the Netherlands, Switzerland, Greece, Croatia and Austria a framework has been defined for these evaluations. However, even within

these frameworks institutions are often free to implement the evaluation exercises according to their needs. So far these assessments are often organised as internal exercises (e.g. Austria, Greece), but they may involve external experts. In some countries a central agency is responsible for coordinating and supporting these evaluation exercises (e.g. Greece, France, and Slovakia). The focus of these institutional evaluations covers not only research activities but also teaching activities. Evaluations of universities are often carried out in the context of accreditation of these institutions or study programmes. For instance in Croatia evaluations focus heavily on study programmes with the aim of harmonising the Croatian higher education sector with the Bologna process and of issuing accreditations for the institutions. Croatia implemented an evaluation plan for higher education institutions according to which evaluations have to be carried out at three-year intervals. Meanwhile, however, research institutions are also subject to evaluations.

One of the most rigorous evaluation systems, applied for institutional evaluations but also to a large extent for programme evaluations has been implemented by the Czech Republic. Evaluations are almost exclusively based on quantitative methods. Indicators reflecting research performance rely heavily on bibliometrics and, the aim is to use the same methodology regardless of the field under investigation, including the social sciences. However, due to resultant methodological problems,, the criteria applied for the quantitative assessment were frequently altered. Since 2008 therefore, with the intention of taking into particular account the specificities of SSH, indicators are calculated using different weighting factors. Despite this, one continues to differentiate between only two groups of disciplines. For a set of disciplines, all of them belonging to SSH, higher weights are assigned to national journal publications and books. Whilst the implications of these modifications on institutional funding are not yet clear, imbalances at the expense of SSH funding are suspected.

Probably the most well know evaluation exercise is the Research Assessment Exercise (RAE), carried out in the United Kingdom which is now being transformed into the Research Excellence Framework (REF). Once again, however, this exercise is not specific to the SSH.

In some countries not only are institutions subject to evaluation but individual fields or disciplines are assessed as e.g. in Estonia. In the early 2000s a number of SSH relevant fields such as History (2003), Sociology (2002), Economics (2000-01) and Arts (2003) were evaluated. In Germany also, whole scientific fields are assessed by the Wissenschaftsrat (German Council of Science and Humanities) in addition to institutional evaluations which also cover the SSH. An assessment providing recommendations concerning the further development and advancement of the humanities was performed in 2006. Recently, field specific rating exercises were carried out - so far these are still pilot exercises aiming to develop adequate methodologies involving the respective scientific communities. –. Sociology was one of the first two pilot exercises to date. The methodology uses quantitative methods and indicators to feed into the peer review assessment.

In Ireland also an exercise reviewing the role and contribution of SSH to the country's social and economic development has recently got under way.

The extent of and the methodologies used for evaluation vary significantly between countries, as does the impact they may have. While the impact of programme evaluations in particular cannot clearly be defined, institutional evaluations often clearly impact funding decisions (e.g. Austria, UK, Finland, Greece, Hungary, Lithuania, Portugal, Spain).

5.3.2 The use of bibliometric data in evaluations

The use of bibliometric data for evaluation studies varies significantly between the countries. While some countries, make rigorous use of the data, e.g. the Czech Republic, others are far more hesitant about using this data, in particular in the SSH. With the increasing use of evaluations, particularly institutional evaluations in the

context of attribution of resources, the adequacy of the data and indicators available are questioned and discussed. As previously mentioned, initiatives have been started at national but also at international level to identify the specific requirements in order to make these indicators suitable for application to the SSH.

6. Outlook

Popular with students, and attracting a large number of researchers all over Europe, the social sciences and humanities can rely on a large knowledge base in Europe. However, this capacity of learned individuals, has not yet fully exploited its potential. Geographically bounded socio-economic or cultural issues and the preoccupation with them remains the dominant pastime for SSH research. However, changes in how research is done (e.g., increasing interdisciplinarity), financial constraints, and a growing pressure to perform research that is useful for mankind also impacts on the European SSH. The need to demonstrate its usefulness has perhaps been more openly and for many years addressed by engineering, the natural and life sciences – scientific fields which seemed to have an obvious direct impact on the private sector and fields that absorbed the majority of public and private R&D funding. The social sciences seemed to have somewhat escaped that pressure as policy makers and industry focussed on themes like the lack of engineers, the need for technology transfer and knowledge-intensive spin-outs. In the many policy documents published at national or international level, one hardly finds a serious discussion about the role of SSH, and thus it comes as no surprise that while national policy makers seem to acknowledge that there are these thousands of SSH researchers and their publications, they are not embedded in any particular strategy or strategically made use of in the slightly overused phrase of 'creating a knowledge society'.

Is it the high degree of fragmentation, the heterogeneous classification of SSH disciplines, bad self-marketing, reluctance to demonstrate impact, or simply a lack of appreciation that caused the SSH to have the image it has today? Whatever the reason(s), it seems that with the European Framework Programme and its inclusion of SSH themes in the 1990s, a small but ever growing type of European SSH research first developed, and that this is not only making its way at European level, but is increasingly influencing scientific debate at national or regional level. While the FP set the ground for SSH researchers to cooperate cross-border and cross-disciplinary within the scope of SSH, with the more recent developments at European level such as joint programming as well as the proclamation of addressing 'societal grand challenges', SSH may obtain a new role and level of appreciation, and overcome to some extent the geographically bounded realm of its impact.

Alongside the Green Paper in 2007, the action to "Jointly identifying major societal challenges beyond national capacity" as well as the Council's identification of "Grand challenges" in 2009 may set the agenda for a new type, role, and impact of European SSH research that is currently in a kind of inception phase. The identification of national priorities as well as themes of supranational interest are a step towards a more coordinated SSH research. This does not necessarily hamper the useful diversity concerning research methods and approaches for investigating the differing societal issues at a bounded geographical level. What may be needed are pull and push factors on both sides: infrastructures like the Social Survey that enables the collection of data and the sound analysis useable for policy makers and societal groupings for researchers. The users – policy makers as well as the greater public, need to be informed about research findings, their implications and impacts. Thus a more active communication seems to be required from the researchers whereas policy makers as well as societal groupings should voice clearly their demands – what are the issues at stake on which they would like to see SSH researchers involved and working on finding solutions?

Again, if SSH wants to get out of its 'sleeping beauty state' and become more widely recognised, the European Research Area as the former research commissioner J. Potočnik put it, is the forum for all researchers and research disciplines and welcomes the active participation of the SSH researcher. Given that societal challenges are at the heart of European policy, SSH researchers should use this opportunity and let their rich knowledge base get into creative, interdisciplinary, and high impact research.

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