

COUNTRY REPORT

Social Sciences and Humanities in

Croatia

2011 Report

European Commission DG-Research



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- a news service;
- annual monitoring reports for all countries covered;
- synthesis reports bringing together key points;
- links to relevant reports and websites.

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1. Country Overview

1.1 Overview of SSH System

1.1.1 Brief Description of the structure of the SSH research system

The establishment of humanities in Croatia can be traced back to the 17th century with the foundation of the University of Zagreb in 1669 as the first university in the whole Balkan region. The establishment of the social sciences in Croatia can be traced to the beginnings of the 20th century when the first department of Sociology and Criminology was established at the Faculty of Law, Zagreb University. The Sociological Association of Croatia was founded in 1918 while sociology became a compulsory course at the School of Law and Economics in 1953. SSH have developed sporadically between the 1st and 2nd Second World Wars and after 1945 they were dominated by the Marxist ideology as in many other countries of the previous socialist block of Eastern Europe.

The paradigmatic change in SSH happened after 1991 when Croatia gained its independence from ex-Yugoslavia and started its way towards a modern market economy and revitalisation of the middle-European cultural inheritance.

On 1 July 2011, Croatia celebrated the decision of the EU Member States to close the accession negotiations to the EU, which should allow for the signature of the Accession Treaty by the end of 2011. Following the ratification procedure in all Member States and Croatia, accession to the EU is foreseen for 1 July 2013.

Despite many turbulences and organisational adjustments to the westerntype of science management, the rules and principles of science coordination in Croatia 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 and Sports (MSES) according to disciplinary division of science aimed at developing all scientific disciplines on the same footing. The main advantage of this horizontal approach was the successful maintenance 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, aimed at preservation of tradition and culture of the standard Croatian language.

The public sector plays the most significant role in both financing and performing SSH in Croatia. It consists of universities, public institutes and the Croatian Academy of Sciences and Arts. The public research sector employs almost all researchers in SSH (99% of total SSH researchers; followed by universities at 63%, and 36% at public institutes) who are affiliated to the 15 public institutes (of 26) and to around 19 faculties (of about 59) associated to seven universities.



In 2009, the public resources (government and the higher education sector) made up 94% of all funds for SSH and performed around 96% of all research in SSH, out of which 55% was performed at universities and 41% at public institutes.

The private sector financed around 4.5% (in 2007 its share was 7%) and performed around 4% of research in SSH. The share of resources from abroad amounted to 1.5%, and the share of PNP was 0.5% of total resources for SSH.

The contribution of research grants from the European Framework Programme is rather modest since Croatia became a full member on 1 January 2006 and is still in the phase of capacity building and learning. The involvement of Croatian partners in SSH projects started within FP6 when Croatia participated in nine SSH projects out of a total of 134 project contracts (see Chapter 2.2.3). Within the FP7, a total of 137 Croatian partners have contracted 108 projects. Four of these are on SSH dealing with knowledge-intensive entrepreneurship, identities and maternities, media policies and welfare innovations.

The share of SSH in total GERD has slightly increased from 19% of GERD in 2007 to 22% in 2009. In absolute terms the funds for SSH have grown from €65.6m in 2007 to €82.4m in 2009.

The faculties affiliated to the University of Zagreb have the strongest track record having been a pillar in SSH research until 1997 when the process of decentralisation of university education was intensified. The new universities were established in a different region of Croatia and combined with the establishment of numerous private schools of professional education -all engaged in business, management and social sciences. Zagreb University still employs more than 50% of all academic staff, and educates almost 50% of all students. The establishment of the private professional schools with 2/3 of students in SSH marked a process of shifting the entire higher education towards social sciences and humanities. According to EUROSTAT, the number of graduates in 2008 was 26938 out of which 38% graduated in the field of social sciences, business and law and 10% in humanities and arts. Similar trends can be expected in the future since the number of enrolled students in SSH constantly increases and reached 52% of all students in the academic year 2008/2009.

The most important resources for SSH are the budget resources, which are allocated on the level of the central state by the MSES while the local authorities (counties and cities) do not play a significant role due to scarce development resources.

The total budget for research grants decreased from €20.6m in 2007 to €15.6m in 2009. The share of social science and humanities in the budget resource is rather constant and reaches around 8% each in 2009. The resources for SSH have also decreased from €3.7m in 2007 to €2.6m in 2010. Resources are allocated through a competition-based research programme (<u>Research Projects</u>) and provides grants for operational and material costs of research projects on both universities and public institutes. The significant part of budget resources is allocated also by the MSES through the different programmes aimed at rejuvenation of the scientific

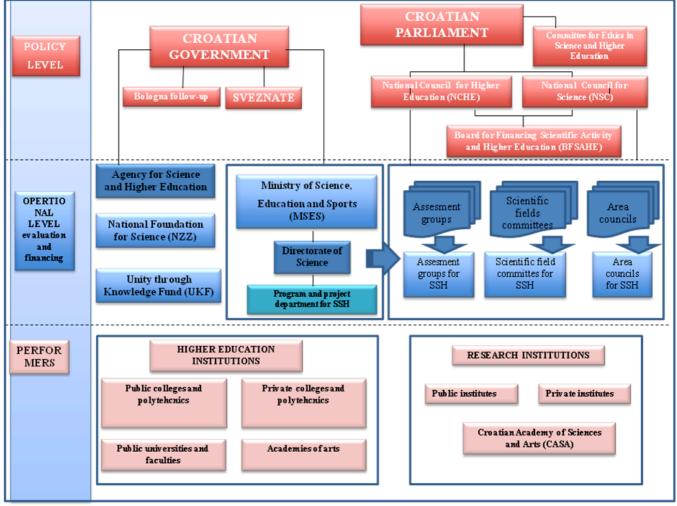


community (Young Researchers Programme), procurement of research equipment, publications, etc. The National Science Foundation (NZZ) which presently invests token amounts of money in SSH (an exception is the programme aimed at reforming the higher education sector) could emerge as a potentially significant funder of SSH in the future due to new regulations of science coordination at the national level.

Regarding its scientific production, Croatia is placed rather well among the group of 23 Eastern European countries in both, humanities and social sciences. According to the SCImago H-index scores, Croatia obtained an H-index value of 8 and ranks the country on 3rd place for 1996- 2009. In the field of humanities in social sciences, Croatia is on the fourth place with an H-index of 20 that is a decline from its third place reached in 2007.

1.1.2 Overview of structure

Figure 1 Overview of the structure of the SSH system



Source: Outlined by the author



The development of the entire scientific system in Croatia (Figure 1) including social sciences and humanities is coordinated and administrated by the <u>Ministry of Science, Education and Sports</u> (MSES). The highest level of policy decisions on strategic development of science and financing of research are made by the **Croatian Parliament** and the **Croatian government**, which regulate them through laws and legal enactments.

The Parliament appoints the <u>National Council for Science</u> (NCS) and the <u>National Council for Higher Education</u> (NCHE) which assumes the main responsibility for the quality and progress of the science and the tertiary education system. The Parliament appoints also the <u>Committee for Ethics</u> <u>in Science and Higher Education</u> with the task to promote ethical principles and values in science and higher education, in business relations and in the application of current technologies.

The NSC and the NCHE appoint the **<u>Board for Financing Scientific</u>** <u>**Activity and Higher Education (BFSAHE)** as a common expert body for determining the criteria for distribution of budgetary resources for scientific activity and higher education.</u>

The NCS is responsible for awarding research grants via the programme *Scientific Projects* (Z-projects), which is the principal mechanism of research funding in Croatia administrated by the MSES. For the purposes of evaluation of the project proposals and related budget allocation, the NSC appoints <u>six scientific field committees</u> classified by scientific area, for natural, technical, biomedical, bio-technical, social science and the humanities, and arts. In the evaluation of project proposals they rely upon the recommendations of **assessment groups**, which consist of individual experts nominated to make a peer-review of project proposals. The NSC nominates also the **area councils**, which implement the process of scientific promotion of individual scientists.

In the area of higher education the NCHE is the major body responsible for the development of the national policy in the HE sector and of a general quality assurance system. The NCHE has the support of the Agency of Science and Higher Education. The NCHE is in charge of approving the requirements of the <u>Rector's Conference</u> (RC), which decides on issues of common interest for the development of universities. The representative of the **Council of Polytechnics and Schools of professional higher education** (CPSPHE) participates in the work of the RC. The **National Bologna Follow-Up Group** was appointed by the Minister's Decision in 2004 as a body responsible for the promotion of the Bologna process i.e. integration and harmonisation of the Croatian universities with the European Higher Education Area (EHEA).

The Government of Croatia has established in April 2008 the Strategic Council for Science and Technology (SVEZNATE) with the main task to coordinate and harmonise the government's efforts on science and innovation development. The Council is presided by the Prime Minister himself, but is not fully functional.



In March 2005, the Government established the <u>Agency for Science and</u> <u>Higher Education</u> (ASHE) and entrusted it with the expert work in evaluating and quality assurance of scientific and tertiary education institutions and study programmes, as well as with the task to ensure the quality of tertiary education (ENQA) and integration in the European network of information centres (ENIC/NARIC).

In addition to MSES, the following two independent agencies provide the research grants for various scientific activities: the <u>National Foundation for</u> <u>Science, Higher Education and Technological Development of Croatia</u> (NZZ) and the <u>Unity through Knowledge Fund</u> (UKF). Both institutions have established different programmes to support basic and applied research projects, educational reform, mobility of researchers, science-industry cooperation, etc.

The **research performing institutions** relevant for the SSH are the public (state) institutes, other public institutions such as the Croatian Academy of Arts and Sciences and tertiary education institutions. Croatia has 26 **public research institutes** out of which nine are in involved in social sciences and six in humanities. There are six academies of arts, and the Croatian Academy of Sciences and Arts.

The seven **universities** include around 58 **faculties** of which 19 are in social sciences and around 31 **university departments** of which 24 are in SSH. The majority of departments are at the University of Zadar, established in 2003. There are furthermore three **private polytechnics**, three **public**, and **25 private schools of professional higher education** mainly focused on business and management.

The **private research sector** in SSH is not developed since there is only one private research centre in the area of political science recorded in the official Register of the MSES.

1.2 Policy challenges and developments

1.2.1 Main societal challenges translated into SSH research

The main societal challenges in Croatia are associated with overcoming rather persistent economic recession and high level of unemployment, which produce social inequalities, exclusion and resentment of citizens. In this context, the underlying social challenge is economic revitalisation and fight against corruption (currently in full swing) manly caused by the nontransparent privatization during transition to market economy. The locally specific social problems include issues like: misunderstood social cohesion (allocation of social benefits and the role of veterans), growing influence of church on social life, non-flexible labour market, low awareness of the role of innovation for economic growth and need for restructuring the economy towards new technology-based sectors.



A special challenge is the possibility of re-employment of working age but inactive population (Obadić and Smolić, 2007; Bađun, 2009). In Croatia, the activity rate (the share of labour force in the working age population aged 15-65 years) is rather low and amounts to 46.3% in 2010 (CBS, 2011).). The main reason for this low activity rate is the implementation of the early retirement programme during the 1990s in order to prevent open unemployment caused by the fast privatization of the state-owned companies. Besides, there is a large number of retired war veterans who are relatively young and still able to work.

The grand societal challenges defined by the Lund declaration are also present in Croatia, such as the shortage of energy supply, natural disasters, the establishing of an efficient health care and pension system -which are both threatened by low employment rate/GDP and rapidly increasing ageing of society. The problems of global warming, current changing of climate or water supply have not been so relevant in Croatia, so far.

Many of these challenges are neglected in social research due to their social sensitivity, but also to the organisation of the science system by funding 3–5 years project cycles that does not seem to be adequate for responding to immediate social challenges, but rather favours continuation and steadiness in scientific research.

The societal challenges transformed into SSH research are usually:

- European integration;
- Values, trust, religiosity;
- Innovation, competitiveness, unemployment;
- The financial crisis and recession;
- Tourism;
- Migration;
- Social cohesion and the civil society;
- Ageing of society seen through the lens of demographic research.

1.2.2 New SSH policy developments

The new policy developments relevant for SSH as well as for the entire research and higher education system are:

- The MSES has proposed and released into the public debate in October 2010 three important laws: the Law on Science, the Law on Universities, and the Law on Higher Education, that were rejected by the academic community and not entered into parliamentary procedure. In April 2011, the Ministry of Science has issued the update version of the laws. While public institutes supports this time the legislations, the universities still reject the new legal framework.
- The National Foundation for Science (NZZ) has launched in April 2011 two new programmes for supporting excellence in scientific research both in social and natural sciences- <u>Research projects</u> and <u>Collaborative Research Programmes</u>.
- Based on the European Commission's Decision of 21 June 2010, the University of Rijeka was awarded the <u>Jean Monnet Inter-University</u> <u>Centre of Excellence</u> in both social and natural sciences. This is the only center of excellence in southeast Europe.



2. Policy Setting System

2.1 Government policy making and coordination

2.1.1 Policy formulation and coordination

The science policy formulations, coordination of science system and budget resources for all research activities including SSH rest within the <u>Ministry of</u> <u>Science, Education and Sports</u> (MSES). The Ministry develops the strategies, action plans, various guidelines and directives as well as the financial instruments that are based on the state budget. The Ministry's actions should be agreed with the Croatian Parliament and Government.

The Ministry relies upon the **National Council for Science** (NCS), which is the highest expert and advisory body for science development appointed by the Croatian parliament. Among other activities NCS determines long and short term research priorities, the national classification of scientific fields, areas and discipline, as well as interdisciplinary fields of science and arts. It proposes to the Government of Croatia the criteria for the distribution of the budget resources for SSH and appoints the members of the scientific field committees for social science and humanities, art councils and assessment groups for evaluation scientific projects.

The NSC and the NCHE, the National Council for Higher Education appoint the <u>Board for Financing Scientific Activity and Higher</u> <u>Education</u> (BFSAHE) as a common expert body for determining the criteria for distribution of budgetary resources for scientific activity and higher education

The Scientific Field Committee for Social Sciences and the Scientific Field Committee for Humanities are rather important bodies since they assist NCS primarily in coordination of the evaluation process of project proposals for awarding the research grants provided by the national budget and distributed by the MSES.

The **Area councils** coordinate the process of evaluation of scientific achievements of individual scientists and recommend their promotion to higher grades to the institutions authorised for promotion.

The main mission of the <u>Agency for Science and Higher Education</u> (ASHE) is to ensure the setting up of a national network for quality assurance in research and the higher education sector.

The remaining institutions with an influence on the policy formulation and development of SSH are the funding agencies – the <u>National Science</u> <u>Foundation</u> (NZZ) and the <u>Unity through Knowledge Fund</u> (UKF). They influence the development of SSH by establishing their supporting programmes and financing projects in their respective domains. It should be stressed that such programmes and projects are rather modest in scope and financial means in comparison with the other scientific areas.

2.1.2 SSH policy Advice

The highest expert and advisory body appointed by the Croatian parliament is the **National Council for Science** (NCS) which influences the development of social sciences and humanities in the four principal ways:

- 1. identifies the long term and short term research priories in SSH,
- 2. determines the share of financial means for SSH provided by the national budget,
- 3. provides the opinions about strategies, regulations, measures, and other policy documents defined by the MSES,
- 4. defines the criteria for founding and evaluating of research projects, institutions and individual scientists including early stage researchers.

<u>The Rectors' Conference</u> is an informal body to advice the authorities on a wide range of issues, especially budgetary policy with respect to higher education institutions, and science policy.

Besides the NCS as a principal formal institution in charge of provision advices on science policy, there are a number of other more informal channels of influence on the development of SSH, as follows:

- Scientific associations and annual scientific conferences in particular areas of SSH;
- Large research institutes, university departments ;
- Croatian Academy of Sciences and Arts;
- Individual scientists' interests and orientations;
- Government offices for social issues;
- Non-governmental organisations and citizens' associations;
- National and international foundations;
- Matrix Croatica (Matica Hrvatske);
- Trade unions, other social representatives;
- Researchers' international networks and collaborations;
- Public debates and fora.

The scientific associations are established in almost all scientific fields e.g. Croatian Sociological Association, Croatian Anthropological Association, Slavic Linguistics Society, Croatian Political Science Association, etc. The associations discuss the progress of respective scientific fields and usually organise annual conferences, which influence mutual communication and trace possible future directions of research. Large or influential public institutes like the Institute of Social Sciences Ivo Pilar, the Institute for Social Research Zagreb, the Institute of Public Finance or the Faculty of Economic and Business of the University of Zagreb map the road of research courses.



The Croatian Academy of Sciences and Arts has a similar role since it brings together the most distinguished intellectuals who shape the social thoughts in Croatia with an impact on public opinion. Besides, these institutions influence the wider settings for social sciences and humanities by their demands and negotiations with government structures for improving the conditions for research activities in social sciences (enlargement of research staff, young researchers, premises, financial means, etc.).

The Government of Croatia established in 1998 the <u>Government Office for</u> <u>Cooperation with NGOs</u> with the aim to create conditions for cooperation and partnership with the non-governmental, non-profit sector. The Office also acts as a <u>Project Implementation Unit</u> (PIU) for the EU Programmes within the framework of pre-accession assistance of the European Union to the civil society sector. One of the influential government offices is the <u>Centre for</u> <u>gender equality</u> that cooperates with many research organisations and NGOs on gender equality issues.

The non-governmental organisations (NGO) and citizens' organisations also shape both public opinion and the interests of scientists. The best example is the <u>GONG</u>, a non-partisan citizens' organisation with the main aim to encourage citizens to actively participate in political processes and to monitor election processes.

The large influence on social research is also coming from the national and international foundations that provide financial means for research projects and shape the research discourses through the process of evaluation and awarding. An example is the <u>National Foundation for Civil Society</u> <u>Development</u> which is the leading public institution for linking and financing of civil society organisations and projects in Croatia. The Professor Dr <u>Marijan Hanžeković Foundation</u> grants the awards for the best scientific papers in economic, legal and institutional topics related to the development of Croatia; and <u>the Council for the Development of Civil Society</u> which is an advisory and expert body to the Croatian Government for monitoring and analysing public politics and civil society and for planning the priorities of the national programmes for awarding grants from the state budget funds to projects and programmes of civil society organizations. Among the best-known international foundations are the <u>Friedrich Ebert Stiftung</u>, the <u>Konrad Adenauer Stiftung</u>, etc.

The influence of other kinds of stakeholders like trade unions, the Croatian Association for the Customers' protection and other social representatives is mainly related to public debates such as round tables, workshops or conferences. They usually invite scientists, social representatives and opinion-makers (e.g. journalist or columnists) to elaborate certain problems in society in order to make political and business elites sensitive to their solutions.

Important influence is also provided by individual scientists who promote the areas of their research in public media, initiate public discussions and organise public fora, which articulate research directions and affect the policy of formal institutions such as the MSES and the NZZ. They also participate in the international research networks and transfer the forefront research topics into the local scientific communities.



All in all, the development of social sciences in Croatia is usually a process of mutual influence and co-evolution of the formal institutions like the MSES or the NCS and various channels used by prominent groups of scientists, distinguished individual scientists and research institutions. This is a rather loose process mainly driven by the bottom-up approach rather than a rigid determination of development directions imposed by the policy maker and public administration.

Although it seems that the impact of social sciences and humanity on policy making and ordinary life is modest, they play a significant role in an indirect way. The best illustration is, for example, the research on depopulation of Croatia, which had an impact on a pro-population policy of the Ministry of the Family, Veterans' Affairs and Intergenerational Solidarity. The research of corruption and privatisation processes, although modest in scope, provides additional legitimating for anticorruption actions.

2.1.3 Main implementing bodies

The main bodies which implement the instruments and measures for supporting SSH in Croatia are the <u>Ministry of Science, Education and</u> <u>Sports</u> (MSES) and the independent financial agencies, the National science <u>foundation</u> (NZZ) and the <u>Unity through knowledge fund</u> (UKF).

The administrative tasks of coordination and implementation of the policy measures of research activities rests within the **Science Directorate** of the Ministry while the monitoring of progress of projects financed by the Ministry is under the responsibility of the **Programmes and Projects Department for SSH** of the Science Directorate.

The National Council for Science (NCS) coordinates the evaluation process of project proposals. The NCS appoints the scientific committees for social sciences and humanities and assessment groups in order to evaluate project proposals.

Another implementing body is the <u>National foundation of Science (NZZ</u>), which has established different research programmes, between them two main social research programmes:

- "Socio-cultural transition from industrial to the society of knowledge"
- European Social survey (ESS).

Remaining projects in the area of social sciences are scattered within other NZZ programmes such as "Brain gain" or fellowships for doctoral students.

Since the **UKF** is focused on fostering research that provides added value to the Croatian economy, it finances projects in the domain of SSH but rather sporadically.



An important component of implementing bodies is the <u>Croatian Network of</u> <u>the National Contact Points</u> (NCPs) dealing with Croatian participation in the EU Framework Programmes (FP). The network of NCPs in Croatia was established and is financed by the Ministry of Science, Education and Sports to provide guidance, practical information and assistance on all aspects of participation in FP to research community in Croatia. The network presently consists of 9 persons located in the Ministry as well as in the Croatian Institute of Technology. There is one national contact point that covers the research priority "Socio-Economic Sciences and Humanities (SSH)" as well as the programme "Science in society".

2.2 Impacting factors

2.2.1 Policy fields influencing SSH policies

SSH policy is entirely in responsibility of the Ministry of Science, Education and Sports (MSES). The role of other ministries in terms of their involvement for policies in SSH research is fairly small. Occasionally, other ministries (Ministry of Economy, Labour and Entrepreneurship; Ministry of Tourism; Ministry of Finance) commission SSH related research projects in their respective areas. However, the sporadic commission of individual research projects did not have a real effect on research policy for SSH so far. The influence of other ministries on SSH policy is mainly developed through their support to non-governmental and civil organisations (e.g. the Centre for women's studies - Zagreb, the National Foundation for Civil Society Development) and through the strategic documents and laws which shape public policies, such as the Anti-corruption action plan (Ministry of Justice), the National policy for gender equality and population by the Ministry of Family, Veterans and Solidarity among Generations. The latter is rather influential, since it deals with the socially sensitive public policies in the domain of social equality, cohesion, and benefits and allowances for selected groups of population.

Only the MSES has the budget resources for carrying out research projects. An exception is the Ministry of Defence¹, which has established the <u>Institute</u> for Research and Development of Defence Systems (IROS) in 2002. The IROS runs several SSH related projects such as the 'Croatian army-Croatian society', human resources and modernisation of the defence system.

Occasionally, the Croatian government commissions research projects that are of strategic interest to Croatia. A good example is the project on costs and benefits of the Croatian integration with the EU, which ended up in 15 independent studies. The project was entrusted to the Institute of economics from Zagreb and involved about 60 researchers from different research organisations.

¹ Regarding other scientific fields, only the Ministry of Agriculture has the Fund for research projects in agricultural research



2.2.2 Influence of European and International Developments

The international influence on the national SSH policy is mainly limited to European developments of ERA and other European programmes like TEMPUS or the Bologna process, while the influence of other world associations is negligible.

As Croatia is at the threshold of joining the EU (expected date is July 1, 2013) the policy makers have recognised the importance of research on European integration and approve many projects in the areas of economic, financial, business and social consequences of the possible integration into the EU. On the other hand, it has also initiated research in the domain of socio-cultural identity driven also by the gain of independence in 1992.

One of the greatest European influences was realised through the Bologna process adopted in Croatia in 2001. It has changed the landscape of the higher education sector in Croatia through the process of harmonisation of legislature and educational programmes, and initiated the programmes for academic mobility. Within the context of higher education, the TEMPUS programme aimed at a higher education reform and contributed significantly to research in the higher education sector. Since 2000, Croatia has participated in 112 different TEMPUS projects and received over €30m.

Finally, Croatia has become eligible for the IPA programme (Instrument for Pre-Accession Assistance) in 2007, which has offered the possibilities for different projects in SSH such as labour and employment, vocational education and training (VET), social service and protection and the problems around disabilities.

2.2.3 Relevance of European and International SSH research

Croatia is fully associated with the EC Framework Programme since 1 January 2006. Before that, Croatia participated in FP5 and FP6 as a third country allowing Croatian partners to participate in the projects as extra members but not to be a member of the consortium. Croatia has participated within FP5 in 29 projects out of which 15 were in the INCO programme. There was no project participation in the SSH programme. The Croatian participants received a total of €282k.

Within FP6, Croatia cooperated with 154 partners, signed 134 project contracts and obtained $\in 16.2$ m of funding. The major part of the approved funds went to the INCO² sub-programme ($\in 3.6$ m) and to the priority themes Life Science, Genetics and Biotechnology for health ($\in 2.3$ m), Sustainable Development, Global Change and Ecosystem ($\in 2.3$ m) and Information Society Technologies ($\in 2$ m).

For full participation in the FP6, \in 6.4m was granted, out of which \in 3.18m were provided from the state budget and the rest obtained from funds from the Croatian Phare programme. The Croatian participants received a total of \in 16.2m.

² Specific International Scientific Cooperation Activities



Croatia participated in nine SSH projects in FP6:

- 1. Kinship and Social Security;
- 2. Wider Europe, deeper integration? "Constructing Europe" Network;
- 3. Languages In a Network of European Excellence;
- 4. Religions And Values: Central And Eastern European Research Network;
- 5. Eastern Enlargement Western Enlargement. Cultural Encounters in the European Economy and Society After the Accession;
- 6. Welfare and Values in Europe: Transitions related to Religion, Minorities and Gender;
- Crime as a Cultural Problem. The Relevance of Perceptions of Corruption to Crime Prevention. A Comparative Cultural Study in the EU-Accession States, the EU-Candidate States and in the EU-States;
- 8. Human Security in the Western Balkan region: the impact of transnational terrorist and criminal organisations on the peace-building process of the region;
- 9. Quality in Gender Equality Policies.

Within the FP7, a total of 137 Croatian partners have contracted 108 projects with the EC co-financing in the amount of \notin 23.9m. A total of 52.6% of funds went for projects within "Cooperation" (\notin 12.6m, out of which \notin 4.2m for Transport), while 45.41% was spent for Capacities (\notin 10.9m, out of which \notin 7.4m for Research potentials), and \notin 0.47m was granted through Marie Curie actions.

According to the CORDA database, Croatia participates currently in six SSH projects within FP7, as follows:

1. <u>IME</u>

Title: Identities and modernities in Europe: European and national identity construction programmes and politics, culture, history and religion.

Research area: SSH-2007-5.2-01 Histories and Identities - articulating national and European identities

Project start date: [2009-05-01]

2. MEDIADEM

Title: European Media Policies Revisited: Valuing and Reclaiming Free and Independent Media in Contemporary Democratic Systems

Research area: SSH-2009-5.1.1. Independent media and democracy in Europe

Project start date: [2010-04-01]



3. <u>NET4SOCIETY</u>

Title: Trans-national co-operation among national contact points for socio-economic sciences and the humanities

Research area: SSH-2007-8.0-02 Measures to support international cooperation

Project start date: [2008-02-01]

4. MYPLACE

Title: Memory, Youth, Political Legacy And Civic Engagement

Research area: SSH-2010-5.1-1 Democracy and the shadows of totalitarianism and populism: the European experience

Project start date: [2011-06-01]

5. <u>WILCO</u>

Title: Welfare Innovations at the Local level In favour of Cohesion

Research area: SSH-2010-2.1-2 Local welfare systems favouring social cohesion

Project start date: [2010-12-01]

6. AEGIS

Title: Advancing knowledge-intensive entrepreneurship and innovation for growth and social well-being in Europe

Research area: SSH-2007-1.1-01 Interactions between knowledge, economic growth and social well-being

Project start date: [2009-01-01]

The partner institutions are various and include, for example, the Croatian Employer's Association, the Institute for Social Research, the Institute Ivo Pilar, the Institute for Anthropology, the Institute for Folklore and Ethnology, etc. However, the most successful institutions are the University of Zagreb that participated in 3 projects in FP6; the Institute for International Relations, which participates in 2 projects (one in FP6 and another in FP7); and the Faculty of Law, University of Zagreb; which participates also in two projects, both within FP7.

Croatia participates in the two projects in the programme Science in Society:

1. EUROSIS - Trans-national cooperation among National Contact Points (NCPs) for Science and Society.

Croatian partner: Croatian Institute of Technology;

2. CEECEC - CSO engagement with ecological economics.

Croatian partner: Association for nature, environment and sustainable



It is interesting to note that only one partner comes from the higher education sector and none from the public research sector. However, there is a possibility that researchers participate in FP projects on an individual-contract basis, which is not recorded by the official statistics in Croatia.

The influence of the EU on SSH in Croatia is made not only through the projects financed by the FP alone but also through the other large-scale European or international projects organised in non-for profit organisations or large surveys, and sponsored by different institutions such as: European <u>Values Study</u>, European Social Survey (ESS), World Value Survey, and <u>International Social Survey Programme</u>. These surveys are of great interest for Croatia since the modest public financing of the research on the national level are not sufficient for surveys based on a representative sample of the population as internationally financed projects usually are. Croatian researchers are by this way included in the internationally relevant research and methodology important for improving the quality of SSH.

Croatia joined the ESS in 2009 owing to the National Science Foundation, which provided funds of €40k for the preparatory activities needed to join the survey. The NZZ concluded a call for joining the fifth round of ESS in October 2010.

Croatia participates with several projects in the ERA-NET initiative such as HERA, HERA-JRP, ERACOBUILD, SmartGrids, etc. However, it is most active in the Southeast European Era-Net (SEE-ERA.NET)³ and its successor the SEE-ERA.NET plus project which started in April 2009 and will end in January 2013. Most prominently, the <u>SEE-ERA.NET PLUS</u> launched a Joint call for European Research projects in September 2009 in order to enhance the integration of the Western Balkan Countries into the European Research Area. The call budget is of €3.5m and is aimed for food and ICT research.

Croatia also participates in the FP7 (Capacities) <u>WBC.INCO-NET</u> project, a regional consortium project with the aim of supporting research and innovation cooperation and enhanced integration of the Western Balkan Countries (WBCs) in the ERA.

There is no data on participation of Croatian institutions in European Technology Platforms or Joint Technology Initiatives.

Assessment studies of the impact of European developments on national SSH have not been carried out, so far.

³ The Southeast European Era-Net – is a networking project within FP6 aimed at integrating EU member states and Southeast European countries (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, and Serbia).



The most important programme of the remaining EU initiatives is the TEMPUS programme, the task of which is to support higher education reform according to the Bologna process. Since 2000, 112 different TEMPUS projects and grants have been running and the amount for project financing exceeded €30m. Due to the outstanding significance of the TEMPUS programme in carrying out higher education system reforms, Croatia is planning to continue its participation in this programme until it joins the EU Integrated Programme for Lifelong Learning. During the last call, Croatian partners are for the first time coordinators of two projects: the University of Zagreb coordinates 'Opening University towards Society: Linking Education-Research-Innovation'; and the Faculty of Economics and Business of the University of Zagreb coordinates the project 'Fostering Entrepreneurship in Higher Education' (FoSentHE).

Among multilateral research cooperation it is worthwhile mentioning the COST projects. Croatian partners participate in 9 COST projects in the domain "Individuals, societies, cultures and health", as follows:

- 1. Ivo Pilar Institute, Zagreb:
 - Human and organisational factors in industrial planning and scheduling (HOPS), from 2004 to 2008;
 - Gender and well being: Interactions between work, family and public policies, in 2005;
- 2. Croatian Studies, Zagreb:
 - East of West: Setting a new Central and Eastern European media research agenda, from 2005 to 2009;
 - Transforming Audiences, Transforming Societies, from 2010 to 2014;
- 3. Rehabilitation and Educational Centre, Zagreb:
 - Cross-linguistically robust stages of children's linguistic performance, from 2006 to 2010;
- 4. Faculty of Law, University of Rijeka:
 - International Law in Domestic Courts (ILDC), from 2007 to 2011;
- 5. Institute of Economics, Zagreb:
 - Science and Technology Research in a Knowledge-based Economy (STRIKE), from 2007 to 2011;
 - Living in Surveillance Societies (LiSS), from 2009 to 2013;
- 6. Institute for Ethnology:
 - Remaking Eastern Borders in Europe: a Network Exploring Social, Moral and material Relocations of Europe's Eastern Peripheries, from 2009 to 2013;



- 7. University of Zagreb:
 - Language Impairment in a Multilingual Society: Linguistic Patterns and a Road assessment, from 2009 to 2013;
- 8. Faculty of Political Sciences, University of Zagreb:
 - The True European Voter: A Strategy for Analysing the Prospects of European Electoral Democracy that Includes the West, South & East of the Continent, from 2009 to 2013;
- 9. University of Zadar:
 - Submerged Prehistoric Archaeology and Landscapes of the Continental Shelf, from 2009 to 2013.

Finally, the structural funds also play a role in shaping SSH projects such CARDS and IPA. Croatia is a beneficiary of the CARDS programme since 2001, and its replacement with IPA (Instrument for Pre-Accession Assistance) in 2007. IPA provides possibilities for different projects related to SSH such as labour and employment, vocational education and training (VET), social service and protection, and the problems around disabilities.

2.2.4 Impact of evaluations

The evaluation culture in Croatia with a view of policy learning and overcoming current weaknesses of science policy or specific supporting programmes is rather low. Since the main aim of research policy is to maintain the national research base and improve scientific excellence in general, the standard evaluation methods based on bibliometric and scientometirc indicators and peer review are the most common. In this context, the evaluations do not have impact on shaping research policy or scientific disciplines including SSH. The evaluation practice is regularly limited to the evaluation of individual researchers for their scientific promotion into the higher scientific grade and evaluation of research projects (ex-ante, interim, ex-post) is a decisive tool for shaping the course of research within each scientific discipline, including SSH.

The evaluation of supporting programmes in total is not a common practice of science policy. The funding agencies like UKF, NZZ or BICRO (the latter is dealing only with innovation) carries out evaluation of the programmes which serve their internal purposes and are not publicly available. The short reviews of programmes mainly on financial matters are usually published by NZZ in their annual reports.

The evaluation of institutions (university departments, state institutes) is rather new practice in the Croatian science and higher education polices, starting in 2007 (see 2.2.4.3 – Institutional evaluation). It was initiated by the Bologna process that has prompted the establishment of national agencies to ensure quality, i.e. the Agency for Science and Higher Education (ASHE) in Croatia. Therefore, it was preceded by the evaluation and re-accreditation of the education programmes (curricula) of the higher education institutions that was carried out within the reform of the higher education sector driven by the Bologna process. The main aim was the harmonisation of the higher education sector with the European standards and guidelines for guality assurance in higher education and its recognition in the European context. The whole process was carried out by the Agency for Science and Higher Education (ASHE) as the institution responsible for guality assurance system and the National Council for Higher Education. During 2005 and 2006 the Agency evaluated all study programmes (about 800 of undergraduate and 200 of graduate university and professional studies) in order to harmonise them with the requirements of the Bologna declaration. There were 264 referees involved, among them 99 foreigners. The process of evaluation of the new study programmes is carried out continuously.

The <u>University of Zagreb</u> is in August 2011 listed for the first time in the <u>2011</u> <u>Academic Ranking of World Universities (ARWU)</u>, commonly known as the Shangahi ranking and is one of the best known rankings of world-class universities. This is the first time that a university from Croatia has ranked among the top 500 world universities.

2.2.4.1 Project evaluation

Project evaluation is the basic form of evaluation of scientific research in Croatia. It is linked to open calls for research grants from the Ministry of Science, Education and Sports (MSES) and other funding agencies, primarily the National Science Foundation.

The most important project evaluation is carried out by the MSES within the broader programme "Research projects, which provides the substantial part of financial means for research activities in Croatia. The programme is not evaluated in total. Instead each project is evaluated individually by the three kinds of evaluations: ex-ante, interim and ex-post evaluations. The National Council for Science (NCS) coordinates the evaluation process of project proposals. The NCS appoints the scientific committees for social sciences and humanities which implement, among their other tasks, the process of evaluation of submitted projects. The committees rely upon the recommendations of assessment groups that evaluate project proposals and produce the priority list of projects with the recommendation of accepting or declining the project proposals for receiving research grants. Evaluation involves peer review by Croatian and foreign researchers. During the last call for projects proposals for the period 2006-2010 there were 37 assessment groups out of which 6 are in social sciences and 8 in humanities.



The results achieved within the research projects include interim evaluations, which are carried out after the first and the third year of project implementation. The first annual evaluation is mainly focused on financial control, while the evaluation after the three years of project implementation is focused on the evaluation of the achieved research results. The ex-post evaluation, usually after five years, includes assessment of the final reports. It is carried out by the Assessment groups nominated by the national Council for Science (NCS). The main criteria include bibliometric indicators –number of scientific papers in highly ranked international journals and citations in specialised databases.

2.2.4.2 Programme evaluation

The evaluation of supporting programmes in total is not a common practice of science policy in Croatia. The funding agencies like NZZ or BICRO (the latter is dealing only with innovation) carries out evaluation of the programmes which serve their internal purposes and are not publicly available.

2.2.4.3 Institutional evaluation

During the period of 2007–2009, the Agency for Science and Higher Education carried out procedures of evaluation of 24 scientific organisations, in line with the Act on Scientific Activity and Higher Education (Official Gazettes 123/03, 105/04, 174/04 and 46/07) and Ordinance on Evaluation of Scientific Organisations (Official Gazette 39/05)⁴. The five evaluated institutes perform research in SSH, including: the Institute of Economics, Institute of International Relations, Institute for Social Research, Institute of Croatian language and Linguistics, and Institute for Migration and Ethnic Studies (see details below).

In the same period, 21 existing higher education institutions (13 faculties, 5 polytechnics and 3 colleges) were also evaluated, in line with the Act on Scientific Activity and Regulation on the Measures and Criteria for Evaluating the Quality and Efficiency of Institutions and Study Programmes⁵. Six of the evaluated institutions belong to SSH, as follows: the College for Business Administration Studies in Zapresic, the Utilus Business School in Zagreb, and all four faculties of law in Croatia, which are components of the universities of Zagreb, Split, Rijeka and Osijek (see details below).

The basis for carrying out external evaluations were self-evaluation reports which scientific and higher education organisations had to draft according to the documents adopted by the National Council for Science and the National Council for Higher Education, respectively. The external evaluation includes also a site visit of experts nominated by the national councils as well as interviews with representatives of the scientific organisation.

⁴ Available at: <u>http://www.azvo.hr/en/arhiva-provedenih-vrednovanja-u-znanosti</u>

⁵ Available at: <u>http://www.azvo.hr/en/arhiva-provedenih-vrednovanja</u>

All final reports of the evaluations were published at the Agency for Science and Higher Education website together with the recommendations. On the basis of the evaluation and reply from the scientific organisation, the national councils adopt final recommendations along with the measures to improve quality, and sent these to the Minister of Science, Education and Sports who then decides whether to issue or deny the license, or issue a letter of expectation which provides the time limit of up to three years to remove deficiencies.

Organisation	Institute for International Relations, Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research excellence and overall efficiency based on different indicators and aspects with a view of recommendations for improvement
Approaches	External evaluation based on self evaluation following pre- established questionnaires
Key results and recommendations	 Overall assessment of the Institute is marked as "good" It is recommended to issue accreditation It is recommended to strengthen scientific human resources vs. administration, broadening the research concept beyond EU and NATO, solve the problem of premises, systematic involvement in European funds, etc.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja-u- znanosti
Tags	Institute for International Relations, quality assessment, Zagreb

Organisation	Institute of Economics, Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research excellence and overall efficiency based on different indicators and aspects with a view of recommendations for improvement
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 Overall assessment of the Institute is marked as "good"; It is recommended to issue accreditation; There are eight recommendations including: the strategic focus of education should be more precise, more international MBA students, better public promotion, more focus on policy papers, etc.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja-u- znanosti
Tags	Institute of Economics, Zagreb, quality assessment



Organisation	Institute of Social Research, Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research excellence and overall efficiency based on different indicators and aspects with a view of recommendations for improvement
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 The overall efficiency of the institute is rated as "very good"; As there are yet some flaws (e.g. lack of scientific personnel), it is proposed to issue a letter of expectations with a period of three years to overcome the deficiencies.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja-u- znanosti
Tags	Institute of Social Research, Zagreb, quality assessment

Organisation	Institute of Croatian Language and Linguistics, Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research excellence and overall efficiency based on different indicators and aspects with a view of recommendations for improvement
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 The overall efficiency of the institute is rated as "excellent". Some minor deficiencies include the lack of personnel and financial means for projects.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja-u- znanosti
Tags	Institute of Croatian Language and Linguistics, Zagreb, quality assessment

Organisation	Institute for Migration and Ethnic Studies, Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research excellence and overall efficiency based on different indicators and aspects with a view of recommendations for improvement
Approaches	External evaluation based on self-evaluation following pe- established questionnaires
Key results and recommendations	 Overall assessment of the Institute is marked as "good"; As there are yet some flaws (e.g. lack of scientific personnel, lack of communication between researchers and management), it is proposed to issue a letter of expectations with a period of three years to overcome the deficiencies.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja-u- znanosti
Tags	Institute for Migration and Ethnic Studies, Zagreb quality assessment

Organisation	Faculty of Law, University of Osijek
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research and educational activities with a view of issuing or denying a license, issue improvement recommendations and follow-up
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 To issue needed licenses; To prepare specialised studies; To enlarge funding for scientific research
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja
Tags	Faculty of Law, Osijek, quality assessment



Organisation	Faculty of Law, University of Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research and educational activities with a view of issuing or denying a license, issue improvement recommendations and follow-up
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 To issue needed licenses; To carry out strategic studies on organisation and educational improvements; To implement Bologna in the whole educational process; To double the funding for scientific research
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja
Tags	Faculty of Law, Zagreb, quality assessment

Organisation	Faculty of Law, University of Rijeka
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research and educational activities with a view of issuing or denying a license, issue improvement recommendations and follow-up
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 To issue needed licenses; To continue preparations for the top-class post-graduate studies in law; To double the funding for scientific research.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja
Tags	Faculty of Law, Rijeka, quality assessment

Organisation	Faculty of Law, University of Split
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of research and educational activities with a view of issuing or denying a license, issue improvement recommendations and follow-up
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 To issue needed licenses; To continue preparations for the top-class post-graduate studies in law; To double the funding for scientific research
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja
Tags	Faculty of Law, Split, quality assessment

Organisation	College for Business Administration Studies in Zapresic
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of teaching activities with a view of issuing improvement recommendations and follow-up
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	 The school fulfils basic conditions necessary to carry out teaching activities; It is necessary to solve spotted weaknesses: (1) the lack of systematic monitoring of quality and effectiveness of educational processes; (2) Modification of strategic, organisational and operational processes in line with evaluation results; and (3) adequate library and reading space.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja
Tags	College for Business Administration Studies, Zapresic, quality assessment



Organisation	Utilus Business School in Zagreb
Type of evaluation	Quality assessment
Period covered	2007-2009
Objectives	Quality assessment of teaching and management activities with a view of issuing improvement recommendations and follow-up
Approaches	External evaluation based on self-evaluation following pre- established questionnaires
Key results and recommendations	Although the School aims to become and remain a small, "boutique" school for educating hotel and tourism there is no evidence of existing policies or operational systems for achieving this strategic vision. Therefore, it is necessary to complete and draft the necessary documents that shall establish the correlation between the mission and the vision, to develop teachers' competences, necessary facilities, equipment, to find strategic foreign partners, etc.
Availability	http://www.azvo.hr/en/arhiva-provedenih-vrednovanja
Tags	Utilus Business School, Zagreb, quality assessment

2.3 Important policy documents

There are no special policy documents for strategic development of SSH. The general policy documents adopted by the Government and the Ministry of Science, Education and Sports (MSES) address the issues in SSH in the same manner as in the other scientific fields. The most important policy documents are:

- The <u>Science and Technology Policy 2006-2010</u>, Ministry of Science, Education and Sports, May, 2006;
- The <u>Action plan for the implementation of the science and technology</u> policy 2007-2010, Ministry of Science, Education and Sports, June 2007;
- The <u>Action Plan for Increasing the Number of Investments in Science</u> and <u>Research</u>, Ministry of Science, Education and Sports, April 18 2008;
- The <u>Strategic plan of the National Foundation of Science 2004-2008</u>, National Foundation of Science, 2004;
- The <u>Strategic development framework 2006-2013</u>, Central Office for Development Strategy and Coordination, August, 2006;
- The <u>Action plan for upgrading the absorption capacity of Croatia for</u> <u>participation in the EU FP7 programmes 2009-2010</u>, Ministry of Science, Education and Sports;
- <u>Action plan for mobility of researchers in 2011-2012</u>, Ministry of Science, Education and Sports, December 2010;
- <u>Action plan for overcoming obstacles and enhancing international</u> <u>mobility in education for the period 2010-2012</u>, Ministry of Science, Education and Sports, September 2010.



The new strategy on science and technology development is in a final stage of preparation and will be realised into the public debate before official adoption.

The written <u>position paper of Croatia</u> within the EU public consultations on "Green Paper from Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation Funding" express the main national statements about the future EU research and innovation funding.

2.4 Thematic priorities at national level

The general priorities of science and technology development in Croatia are defined in the <u>Science & Technology Policy of the Republic of Croatia 2006-2010</u> which is the main strategic document for S&T development in the current period. It emphasises those research areas which support progress of the economy and industry directly, such as biotechnologies, new synthetic materials, nanotechnologies, industrial design, etc. However, the social sciences and humanities are emphasised as being crucial for meeting the present socio-cultural and political challenges. The priorities concerning the domain of SSH are:

- Fundamental knowledge about human being and society, necessary for Croatia's national development;
- Development of understanding of humanity, national identity and particularity;
- Preservation of natural wealth and cultural heritage, including linguistics research;
- Research in purpose of increasing state effectiveness and developing a modern democratic society;
- Understanding and grasping social processes and risks the new technologies bring, global economic growth, changes in the demographic structure and increased complexity of governing modern societies; and
- Research with the purpose of developing national economic efficiency based on the values of a humane society.

The Action Plan for the implementation of the S&T policy 2007-2010 identifies the 10 long-term priorities that include also "Social and human sciences, Croatian identity", and four short-term priorities which include "Croatian Identity/Croatian contribution to culture, religion, art and sciences; and Croatian language".



The classification of all projects and programmes in these two broad research priorities does not mean that the specific research themes dominate Croatian SSH research. Instead, the research projects in Croatia, including SSH, are primarily financed through the programme "<u>Research projects</u>" administered by the MSES, which is divided into six scientific areas. The choice of research topics and subjects within the areas follows a bottom-up approach and is left to the interests of researchers and their scientific merits. Of the total 2075 projects , 321 belong to social sciences and 313 to humanities. The range of research topics is wide and diverse and it is not possible to unambiguously determine the research priorities.

An alternative approach to determine priorities is by the size of funding for each of the research discipline. By funding criteria the research priority in social sciences is economics, which absorbs 24% of all funds for social sciences in 2011. However, a set of disciplines including sociology, political sciences, social geography, social work and security studies absorb 26% of all funds. These are followed by education (15%), law (14%), information sciences (13%), and psychology (8%).

The leading disciplines in humanities are research on languages, and literature, which absorb 32% of the total funding for humanities. They are followed by history (19%), archaeology (14%), history of arts (11%), ethnology and anthropology (10%), philosophy (9%), arts (3%), and theology (2%). Languages and literature are, in terms of financial means, the absolute priority within the entire SSH since they absorb 16% of all funds for SSH.

Some topics such as social cohesion, social inclusion/exclusion, social policy, civil society, gender research, etc. are mainly financed by the foreign foundations which support this kind of research throughout Europe.

In order to select research priorities in Croatia it is necessary to combine the financial data on research disciplines and a sort of "content analysis" of the current research programmes and projects. Such an analysis delivers the five priorities listed below. The research projects financed by the National Foundation of Science (NZZ) have been also taken into account.

⁶A comprehensive evaluation of all projects financed by the MSES within the Research project programme has been carried out in 2010 in order to reduce the scarce budget resources. The funding for about 10% of projects has been terminated and the number of projects was reduced from 2308 to 2075. Around 52% of projects received were reduced in financing. The remaining 40% of projects are funded in the same amount because they achieved good results.

1. LANGUAGES AND LITERATURE RESEARCH

Croatian language and literature research in Croatia become very important after Croatia gained its independence. It is focused on establishing the new standard Croatian language that was previously standardised as a part of Serbo-Croatian language in former Yugoslavia. The research also includes the corpus of lexis and terminology, its norms and functional styles especially in comparison to other languages and in the local and European (international) context. In addition to linguistic research financed by the MSES, the National foundation of Science (NZZ) also finances a large-scale project "Building Croatian vocational terminology – project of coordination" that aims to establish a scientific centre within research or educational institutions in order to coordinate the building, establishing and harmonisation of Croatian vocational terminology. The project also organises the training of experts, which will systematically take care of Croatian terminology.

2. SOCIO-CULTURAL IDENTITY

Socio- cultural identity is a part of long and short term research priorities in SSH in Croatia. Following defined priority fields in The Action Plan 2007-2010 (Ministry of Science, Education and Sports) most of the research projects in SSH within last call for proposals included different aspects of identity. A tentative list of research projects dealing with the problems of identity illustrates at best the diversity of research topics related to this priority. These are:

- Modernisation and Identity of Croatia in the 20th century;
- Politics and Modern Identities in the 19th and 20th century;
- Croatian Identity in European Context: Middle-age Monumental Heritage;
- Identity of Croatian Adriatic Area and European Integration Processes;
- Media and Social Construction of Social Reality: Identities and Integrations;
- Modernisation, Multiculturism and Croatian Identity;
- Croatian Identity, Socio-cultural development and Globalisation;
- Promotion of Cultural Identities and Processes of Croatian Integration in EU;
- European Area of Justice: Securities, Freedom and Identity of Croatian Judicial System;
- Identity and Change: Adjustment of Croatian Public Law;
- Resources for Croatian Heritage and Croatian European Identity;
- Discursive Aspects of Cultural Identity;
- Culture in Transition: Hybridisation, Representations, Life Praxes;
- Traditional and Contemporary Culture and Identification Processes.



3. EUROPEANISATION AND EUROPEAN INTEGRATION

The possibility of full membership of Croatia in the European Union has been subject to many analyses since the accession negotiations between the EU and Croatia were officially opened on October 4, 2005. The research is driven by critical observations of a number of local conditions and criteria to be met in the fields of economy, democracy, civil society, regional development, anti-corruption and legal issues. The research on harmonisation and standardisation in many areas such as the legal system, science and educational systems, agriculture, realestate market, etc. are also carried out. On the other hand, scientific research is also concerned with the possible impact of European integration on the economy, competitiveness and the role of some industrial sectors (i.e. tourism) which are essential for the Croatian economy. Besides, Europeanisation of a wide spectrum of other areas are analysed such as social programmes and social cohesion, science and educational system, agricultural system, and real-estate market.

4. ENTREPRENEURSHIP AND COMPETITIVENESS

The transition to a market economy and requirements for EU integration provide the floor for new topics in economic research on the microeconomic level such as entrepreneurship, competitiveness, small and medium sized companies, innovativeness, corporate governance, foreign direct investments, etc.

In addition, economic research is also occupied with macro-economic issues such as: Macroeconomic convergence of Croatia during EU accession; Socio-economic aspects of unemployment; poverty and social exclusion; restructuring and competitiveness of Croatian companies; Innovation, human capital investment and growth competitiveness of Croatia.

Priorities at national level

	Behaviour, cognition,
X	Competitiveness, Innovation
X	Conflicts, peace, security and human rights within the EU and beyond
	Crime and Crime prevention (including drugs, organised crime etc.)
X	Cultural heritage (including preservation and conservation)
	Democracy, governance, accountability and responsibility
X	Demography (Ageing, Fertility)
	Economy and finance
X	Education, skills, knowledge and life-long learning
X	Employment, Work, Working conditions
	Ethics
	Families, life-styles and well-being
	Gender, gender equality
	Globalisation
	Health and Health systems
X	Identity, religion, language, multiculturalism
	International relations
	Migration
	Social cohesion, exclusion, inequalities, poverty
	Sustainable development
	Urban and rural development
	Others



2.5 Important research programmes

Programme title	"Research projects – Social sciences"
Start date	1993
Planned end date	No planned end data
Planned total budget	Budget is planned only on an annual basis
Budget 2011/2012	€1.3m
Implementing organisation	Ministry of Science, Education and Sports
Target group	All researchers in Croatia in public and private research organisations and universities
Key goals	Long term scientific research activities in the domain of social sciences
Website	http://zprojekti.mzos.hr/page.aspx?pid=96&lid=1
Tags	Social sciences, research projects, Croatia

Programme title	"Research projects – Humanities"
Start date	1993
Planned end date	No planned end data
Planned total budget	Budget is planned only on an annual basis
Budget 2011/2012	€1.3m
Implementing organisation	Ministry of Science, Education and Sports
Target group	All researchers in Croatia in public and private research organisations and universities
Key goals	Long term scientific research activities in the domain of humanities
Website	http://zprojekti.mzos.hr/page.aspx?pid=96&lid=1
Tags	Humanities, research projects, Croatia

Programme title	Socio-cultural transition from industrial to the knowledge based society (STRUNA)			
Start date	2008			
Planned end date	No planned end data			
Planned total budget	€0.4m for 2009			
Budget 2011/2012	No data available			
Implementing organisation	National Science Foundation (NZZ)			
Target group	All researchers in Croatia in public and private research organisations and universities			
Key goals	To foster development, systematisation and unification of Croatian professional terminology			
Website	http://www.hrzz.hr/index.php?option=com_content&view=articl e&id=29&Itemid=⟨=en			
Tags	Croatian language, professional terminology, development			

2.6 SSH research infrastructures

2.6.1 National infrastructures

The national infrastructure for research in SSH is rather well developed in terms of the number of public institutes and faculties/university departments. The 15 state institutes out of a total 26 are involved in SSH. The seven universities include around 58 faculties of which 19 are in social sciences, and around 31 university departments of which 24 are in SSH. The majority of departments are at the University of Zadar, established in 2003. There are six Academies of Arts, and the Croatian Academy of Sciences and Arts.

A new modern National University Library was opened in 1995 with extensive library funds, while the Faculty of Humanities and Social Sciences in Zagreb established its new library (the second largest in Croatia) in March 2009. The premises consist of 8,500 squared meters on 8 floors. It has 600,000 books, and 200 PCs with the capacity for 750 users.

The on-line catalogues of all libraries at the universities, public institutes as well as the city libraries are networked and are easily accessible. The full-text database of all journals published in Croatia is available on line on the portal <u>Hrcak</u> (hamster). The main shortcoming of research infrastructure is limited access to the full text databases of foreign journals and international bibliographic databases due to limited resources for subscriptions.



2.6.2 International infrastructures

The main goal of ESFRI is to define the strategic roadmap for Europe in the field of research infrastructures and to develop pan-European infrastructure network. Each country-member is also expected to drive such a roadmap on the national level. Croatia has yet failed to define an ESFRI roadmap.

However, Croatia is a member of ESFRI since October 2010 and participates in three related projects: CLARIN, DARIAH and ESS.

CLARIN is devoted to establish an integrated and interoperable research infrastructure for the language technology needed in SSH research; DARIAH supports digitally enabled research across the humanities and arts; and ESS analyses attitudes, beliefs and behaviour patterns of diverse European populations.

CLARIN was just completed on June 30, 2011 and it applied for the ERIC status. ERIC is the Community legal framework for a European Research Infrastructure Consortium (ERIC), which entered into force on 28 August 2009. This is a specific legal form designed to facilitate the joint establishment and operation of research infrastructures on the common European supranational level. The contact point in Croatia for ERIC is the Croatian Institute of Technology (HIT). The Croatian partner in CLARIN is Department of Linguistics, Faculty of Humanities and Social Sciences of the University of Zagreb.

Following the successful completion of the DARIAH preparatory phase project in February 2011, DARIAH will submit an application to the European Commission to establish a European Research Infrastructure Consortium (ERIC). The Croatian partner in DARIAH is the Institute Rudjer Bosković, Zagreb.

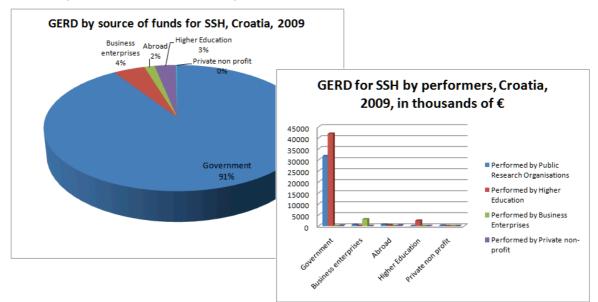
The survey organisation for the Round 5 of the European social survey (ESS) from Croatia is the Institute for Social Sciences Ivo Pilar, Zagreb, the funding organisation is the Croatian Science Foundation and the survey organisation in Statistics Finland.

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3. Funding System

3.1 Overview of funding flows

Figure 2 Overview of funding flows



Source: Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010

According to the Central Bureau of Statistics, the financial and economic crisis reduced the R&D expenditure from 0.9% of GDP (\in 421m) in 2008 to 0.83% of GDP (\in 383m) in 2009 that is considerably below the EU27 average of 1.9%.

The public sector plays the most significant role in both financing and performing SSH in Croatia. In 2009, the public resources (government and higher education sector) made up for 94% of all funds for SSH (in 2007 – 90.5%), while the private sector contributed with 4.5% (in 2007 its share was of 7%). The share of resources from abroad amounted to 1.5%, and the share of PNP was 0.5% of total resources for SSH.

The majority of GERD for SSH, usually around 55% (both in 2007 and 2009), is performed by the higher education institutions (HERD), while another 40-41% was executed by the public institutes (GOVERD). Important is the fact that SSH are mostly performed by the public sector –universities and public institutes- which together performed more than 95% of all research in SSH (95% of GERD in 2007 and 96% in 2009). The share of the business sector (BERD) in performing SSH remains about 4% since 2007. It includes mainly research in economics and business. The share of the private-non-profit sector in performing SSH is very modest and amounted to 0.5% in 2009 and 0.6% in 2007.



The share of SSH in total GERD has slightly increased from 19% of GERD in 2007 to 22% in 2009. In absolute terms, the funds for SSH have grown from \in 65.6m in 2007 to \in 82.4m in 2009. The remaining 78% of the total GERD was spent within other scientific fields, mainly for engineering and technology (36%), natural sciences (19%), medical sciences (12%), and agricultural sciences (11%). The major part of GERD for SSH was spent by humanities and arts, equalling 13%, while the remaining 9% was spent in social sciences (Figure 3).

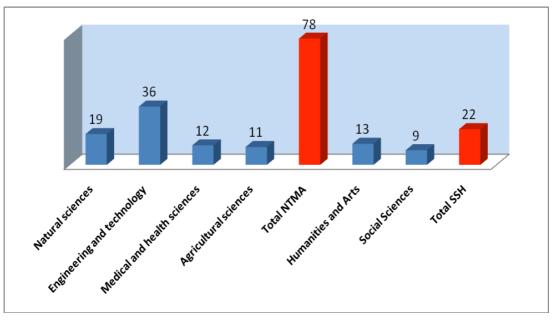


Figure 3 GERD by fields of science, Croatia, 2009 (%)

Source: Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010

3.2 National public SSH research funding

3.2.1 Overview of funding importance

Research activities in the domain of SSH in Croatia are mainly carried out by the public research sector, and up to 94% of all funds for SSH in 2009 are equally publicly funded (see section 3.1). The government financing of SSH includes the following two channels:

- 1. Budget resources provided by the MSES which are allocated through the four main instruments:
 - institutional funding (overheads, phone, energy, etc.) including salaries of researchers;
 - competition-based research grants by scientific disciplines via the "Research projects" programme (only for operational and material costs of research projects);
 - competition based grants for research novices (salaries and scholarships);



- competition based grants for other research activities such as procurement of equipment, publishing of books/proceedings, activities of research associations, and organisation of scientific conferences;
- contract research with other government bodies at the central and local level (ministries, local authorities);
- 2. Contract research with the independent public financial agencies such as the National Foundation for Science (NZZ) and the Unity through Knowledge Fund, through different programmes.

The most important resources for SSH are the budget resources, which are allocated on the level of the central state by the Ministry of Science, Education and Sports (MSES). The total budget for R&D of the MSES in 2009 amounted €135m accounting for 0.84% of the State budget, or 0.3% of the GDP. The largest part of public funds are spent on institutional funding that amounted in 2009 to 33.3% of MSES' Science budget -out of which 85% is spent for salaries of researchers.

Competitive research grants absorb about 16% of MSES resources. A substantial part of MSES funds (30%) is spent for the "Young Researchers Programme" (scholarships and salaries), while the remaining 18-20% is spent on research-supporting programmes aimed at procurement of equipment, support of publishing activities, conferences and scientific associations.

Budget resources provided by the MSES usually make 80% to 85% of total research funding at public research institutes. Due to the lack of data, it is difficult to calculate the ratio between institutional and project funding provided by the budget resources. Generally speaking, 70% of these budget resources are spent on salaries; 10% on institutional funding (overheads, phone, energy, etc.); 10% on research grants (material and operational costs); and the remaining 10% is spent on other research-supporting activities (conferences, publishing, etc.).

The remaining 15% to 20% of research funding are coming from contract research with other bodies of the central government (ministries); local governments and financial agencies (10%); and foreign resources (from 3% at public institutes to 10% at universities). The contribution of the business sector is rather small and varies from 0.1% for universities to 1.5% to public institutes.

The competition based research grants provide financial means only for operational and material costs of the research projects. Although they seem insignificant form the financial point of view, they are the most critical and important resources of "bottom-up" projects, and the means to the researchers' responsive mode of financing basic research in Croatia. They help to preserve the independent development of the national science base, the varieties of research subjects and areas and scientific autonomy of researchers.



Scarce budget resources influence more and more the direction of research institutions towards new financial resources. The National Foundation of Science and the EU framework programmes are the most preferred alternative resources of funding research activities.

3.2.2 Institutional funding

Institutional funding is provided only by the State budget and distributed by the Ministry of Science, Education and Sports. If salaries for researchers are included, institutional funding is the most important source of research financing in the domain of SSH. From the perspective of the MSES, institutional funding and salaries for researchers absorb about 35% of its total budget for R&D while project funds absorb about 16%. From the perspective of the individual research organisation in the area of SSH budget, institutional funding make about 75% of the revenues of the research organisations. 10% is spent on infrastructure (overheads, phone, energy, etc.) and the rest on salaries for researchers. However, the percentage of project-based funding and institutional funding may vary greatly among institutions due to the market viability of research subjects and the market orientation of institutions.

The criteria for allocating institutional funding are rather formal and include the number of researchers multiplied by the coefficient assigned to their scientific grades. This means that no specific formula based on scientific merit of institutions (e.g. number of publications, commercial revenues, etc.) is used for granting institutional funds.

The institutional funding for public institutes in the domain of SSH amounted to $\in 2.7m$ in 2010, which is a significant increase compared to $\in 1.9m$ spent in 2007. However, the competitive-based research grants for SSH projects on both public institutes and universities decreased from $\in 3.7m$ in 2007 to $\in 2.6m$ in 2010. The institutional funding for R&D at universities is allocated according to the annual lump-sum model which does not distinguish research and education expenditure.

It is important to mention that the MSES provides additional funds to various programmes (e.g. scientific equipment, publications, conferences, etc.), which contribute to the development of scientific research in SSH as well for other scientific fields. Although these programmes are competition-based, i.e. they assume public calls, evaluation and selection procedures; they are more focused on the preservation and developing of the science base in Croatia than on the selection of projects by scientific excellence or research priorities. These programmes share, thus, some features of institutional funding.

3.2.3 Individual funding

The funding provided directly to individual researchers or research teams to carry out specific projects of their own choosing are carried out through competition-based research programmes financed by the Ministry of Science, Education and Sports: Research projects-social sciences, and Research projects-humanities. The programmes follow broadly–defined research priorities determined by the National Scientific Council (NSC), which allows researchers to propose research projects of their own interest and choice (see section 3.2.4) The classification of NSC follows the Frascati, FOS (Field of Science) combined with the national specific fields of science related to the higher education system (see Table 1 and Table 2).

Table 1 Research projects and pogramess SSH domain by Fields of Education 22 and 31, 2007-2011

Fields	Number of projects	% of total number
Economics	107	15,24
Information sciences	43	6,13
Education Science	59	8,40
Political Sciences; Sociology; Social Geography; Social Work, Security Sciences and related subjects	70	9,97
Law	51	7,26
Psychology	36	5,13
31 Social and behavioural sciences	366	52,14
History	67	9,54
Archaeology	29	4,13
Philology	135	19,23
Philosophy	34	4,84
History of Arts	29	4,13
Ethnology and Anthropology	25	3,56
Religion	6	0,85
Arts	11	1,57
22 Humanities	336	47,86
Total SSH	702	100,00

Source: MSES, 2011.



3.2.4 Programme Funding

The programme funding is the most important policy instrument for financing SSH in Croatia. The programmes financing is established by three institutions:

- Ministry of Science, Education and Sports (MSES);
- National Foundation for Science (NZZ); and
- Unity through Knowledge Fund (UKF).

The two SSH relevant programmes are "Research projects–Social sciences" and "Research projects–Humanities". These are the pillars of SSH research funding. They are a part of the wider programme "Research projects" administered by the MSES. The programme is organised by the disciplinary division of science into areas, fields and branches, and is based on the Regulation of Scientific and Artistic Domains. Its horizontal approach assures an equal level of scientific excellence in all areas of science. The proportion of financing remained rather stable (Table 2). The share of social sciences in the budget resources are constantly around 9%, while the share for humanities varies between 7% and 10%.

	Budget resources foreseen by NSRP*1996	Budget resources in 2003	Budget resources in 2007	Budget resources in 2010
Natural sciences	25.3	24.8	22.6	26.4
Technical sciences	26.7	17.4	22.4	22.4
Bio-medical sciences	19.9	28.2	25.4	23.6
Bio-technical sciences	12	9.6	12	11.1
Social sciences	9.2	9	9.2	8.2
Humanities	6.9	9.8	8.5	8.2
Total	100.00	100.00	100.00	100.00

Table 2 MSES budget for research projects and programmes by scientific fields, comparison of 1996, 2003, 2007 and 2010 (in % of total)

Source: Higher education in Croatia, OECD, 2006; MSES, 2008 and 2011 * National Scientific and Research Programme (1996-1998)

After a comprehensive evaluation of all the projects financed by the MSES within the Research project programme carried out in 2010 in order to reduce the scarce budget resources, the funding for about 10% of projects has been terminated, around 52% of projects received reduced financing while the remaining 40% of projects are funded in the same amount because they achieved good results.

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The number of projects was reduced from 2308 to 2075 in 2010 (see the footnote on the page 21). Presently, the Ministry supports 321 projects organised in 49 programmes in social sciences, and 313 projects organised in 50 programmes in humanities (Table 3). The total budget for research grants amounted to €20.6m in 2007, of which 9.3% was spent on social sciences, and another 8.5% was spent on humanities.

Table 3 MSES budget for research projects and programmes by scientific fields and sub-fields of SSH in 2010

Scientific field	Number of programmes	Number of projects	Budget resources for SSH (in %)	
SOCIAL SCIENCES	49	321	49.9	100
Economics and business	15	98	11.9	24
Information sciences	5	42	6,3	13
Pedagogy	5	47	7.5	15
Political science; sociology; social geography; social work; security sciences	11	60	12.8	26
Law	6	43	7.1	14
Psychology	7	31	4.1	8
HUMANITIES	50	336	50.03	100
History	12	63	9.6	19
Archaeology	4	27	6.7	14
Philology	16	129	16.2	32
Philosophy	6	30	4.5	9
History of Arts	6	27	5.3	11
Ethnology and Anthropology	5	24	4.9	10
Religion	0	4	0.8	2
Arts	1	9	1.6	3
TOTAL SSH	99	657	100	

TOTAL fields	319	2308	100
Natural sciences	50	346	26.4
Technical sciences	65	344	22.4
Bio-medical sciences	66	510	23.6
Bio-technical sciences	39	241	11.1
Social sciences	49	321	8.2
Humanities	50	313	8.2

Source: MSES, 2011



The leading discipline is philology that absorbs alone 32% of funds for humanities and 16% of funds for all SSH. The field of economics and business and the broad field of political sciences, sociology, etc. account for around 12% each.

In addition to the programmes of the MSES, the National Foundation of Science (NZZ) supports the programme "Socio-cultural transition from industrial to the society of knowledge" limited to the development of the Croatian professional terminology. It also supports participation of Croatia in the European Social survey (ESS) with $\in 0.3m$ funds in 2010.

3.3 Private research funding

As reported by the Central Bureau of Statistics in 2009, the private sector contributed with 4.5% of GERD for SSH. Although the insight into the exact data on private financers is not publicly available and requires special procedures, it is possible to assume that the majority of private funders are recruited from large companies as they are also the most frequent donators for research organisations and regularly provide chartable funds. Such companies are the Croatian Telecom-HT, the INA group -Oil Company, the HEP group– Energy Company, Croatia Reinsurance Company, etc. The contract research for these and similar companies is rather different in aims and scopes. However, the majority of research is contracted with the faculties and institutes of economics and business. Rarely, wider social issues are supported. For example, the HEP group was interested in the socio-cultural acceptance of their plants and facilities as well as in their environmental impacts.

The large private companies are mainly focusing on topics in economic like privatisation processes, impact of foreign direct investments, and their market positioning. The smaller companies are mainly contracting research for business consulting, management and staff education.

3.4 Foundations/ not-for-profit funding

The share of resources from foundations and private not for profit organisations (PNP) amounted to only 0.5% of total resources for SSH in 2009 as reported by the Central Bureau of Statistics. There is a possibility that projects supported by foundations are carried out by institutions which cannot be officially classified as research institutions (associations, ad-hoc research teams or individual researchers) and are omitted from the official statistics but have a role in shaping social thoughts, research directions and overall social and democratic climate. On the other hand, the existing foundations in Croatia are mainly established to bear the consequences of the homeland war (foundations for veterans, de-mining, children of killed veterans, parentless children, the "truth about the war", etc.), while the foundations interested in scientific research, publications or expert studies are less common.

The Government Office for Cooperation with NGOs lists only one national foundation - the National Foundation for Civil Society Development which is the leading public institution for collecting and disseminating expert knowledge relevant for the development of civil society organisations. It undertakes different activities described in the annual reports, which include among other tasks, the provision of research and expert grants, publishing of the professional-popular journal Civilno društvo (Civil Society), publishing of expert books, handbooks and studies, organisation of conferences, supporting mobility of experts, etc. In the period 2004-2008, the Foundation has approved 878 different grants through 25 public calls and 18 expressions of interest. It has invested around €11m in civil initiatives, projects, programmes, institutional supports to civil associations, decentralisation, regional development, etc. The financial resources of the Foundation are provided mainly by the constant inflow of funds from the lottery, the State budget and partner organisations.

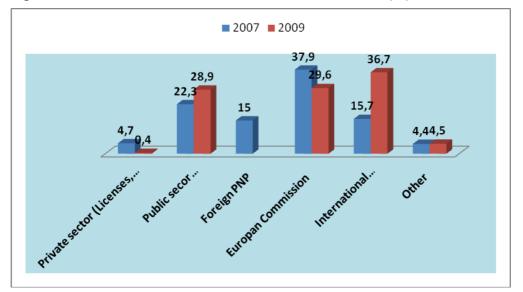
Due to the lack of national foundations and not-for-profit funders, researchers are mainly oriented towards foreign foundations. The best known in Croatia are the Friedrich Ebert Stiftung, the Konrad Adenauer Stiftung, the Heinrich Böll Stiftung, the Friedrich Naumann Stiftung, the Open Society Institute, the Anna Lindh Euro-Mediterraneas Foundation for the Dialogue between Cultures, etc.



3.5 European and international funding

As reported by the State Bureau of Statistics, the total resources for R&D from abroad in 2009 amounted to \in 26.6m or 6.9% of GERD. The total resources from abroad for SSH amounted to \in 1.28m or 4.8% of the total resources from abroad and 1.5% of total resources for SSH. While the majority of resources for SSH from abroad came in 2007 from the European Commission (38% or around \in 0.5m), in 2009 majority of foreign resources were provided by the international organisations (37% or \in 0.48m). Foreign public resources provided about 29%, and 15% by foreign PNP organisations. The least resources are coming from private sector, representing only about 0.4% (Figure 4).

Figure 4 Resources from abroad for SSH, 2007 and 2009 (%)



Source: Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010.



4. Performing System

4.1 Overview of the performers

The main performers of SSH are universities and public institutes in Croatia. Universities perform around 55% of GERD for SSH while another 40% to 41% was executed by the public institutes. These sectors together employ 99% of all researchers in SSH who are affiliated to the 15 public institutes (of 26) and to around 19 faculties (of about 59) associated to seven universities.

The most important performer is the Croatian Academy of Sciences and Arts, which has 5 departments (out of 9) devoted to SSH and Arts. There is only one private research institute involved in political sciences, namely, Political Science Research Centre (PSRC).

4.2 Higher Education Institutions

4.2.1 HEIs as education performers

Higher Education institutions (HEIs) consist of the three main types of institutions: universities, polytechnics and schools of professional higher education. The universities may include faculties and academies of arts as legal entities, and may establish a number of other constituent units (departments, institutes, etc.).

The universities, the faculties and the academies of arts provide university higher education and perform scientific, professional and artistic programmes. The polytechnics and schools of professional higher education organise professional studies and perform other professional educational programmes.

The HEIs may be public (established by the State) or private and established by the founders in the manner prescribed by the relevant laws and regulations. All universities and faculties in Croatia are presently public while the polytechnics and schools of professional higher education are private and public. All the HEI in Croatia are non-profit institutions and perform their activities as public service.

In 2001, Croatia joined the Bologna declaration and accepted all action lines of the Bologna process. The new Law on Science and Higher Education adopted in 2003 introduced the principles of the Bologna process. The Bologna process has had an outstanding impact on the Croatian higher education system in terms of accelerating reforms of study organisation, quality assurance and the development of the national qualification framework. The process of harmonisation with the Bologna Declaration was very demanding and an all-encompassing process. It involved the redefinition and evaluation of more than 800 study programmes in 2005 and 2006.

It is expected that the reforms will contribute to overcoming the main shortcomings of the HE system in Croatia which consist of large drop out of students (only about a third of enrolled students graduate) and the length of study.



The mobility of students and teachers is low. In terms of inflow of students (ISCED 5-6) from EU-27, EEA and Candidate countries - as % of all students in the country the share is stable in the period 2003-2009, about 0.2%. In the same period EU reported steady increase from 2.5% to 3.1%. However, about 6.4 % of Croatian students (ISCED 5-6) studying abroad in 2009, compared to 2.7% of EU students as % of all students.

The mobility of students is an important issue for Croatian policy makers since 2004. Many actions have been undertaken in changing the institutional set up for mobility. The <u>Agency for Science and Higher Education</u> was established in 2004 as well as the <u>ENIC/NARIC office</u> for the recognition of qualifications. The most recent action is the establishment of the <u>Agency for mobility and EU programmes</u> in October 2007, and the participation of Croatia in the EU mobility programmes such as the Marie Curie-People, EURAXESS and Erasmus Mundus (the last two are open from 2008/2009).

There are currently around 146 higher education institutions in Croatia, out of which about 105 are public and remaining are private. There are around 58 faculties of which 19 are in social science and around 31 university departments of which 24 are in SSH. The majority of departments are at Zadar University which is a rather new university established in 2003. There are 13 public and 3 private polytechnics and 3 public and 25 private schools of professional higher education. There are also 4 academies of arts and three catholic-theological faculties in Zagreb, Split and Đakovo. Contrast to public polytechnics, which are mainly oriented towards technical professions, the private schools of professional higher education and polytechnics are mainly established in the more lucrative areas such as economics, management and business.

University studies are organised in seven universities⁷, which are:

- 1. <u>University of Zagreb;</u>
- 2. University of Rijeka;
- 3. Josip Juraj Strossmayer University of Osijek;
- 4. University of Split;
- 5. <u>University of Zadar;</u>
- 6. <u>University of Dubrovnik;</u> and
- 7. University of Pula.

The largest university is the University of Zagreb with 28 faculties of which 7 are in the domain of SSH. The university also includes 3 academies of arts, 1 teacher education academy and 1 university centre in social sciences – the "Croatian studies",

⁷ Ministry of Science, Education and Sports website (<u>http://public.mzos.hr/Default.aspx?art=6511&sec=2254</u>)



Before 1997, when the new type of non-university institutions was established, the higher education was largely concentred at Zagreb University, while educational systems in other regions were rather neglected. In order to provide proportional and distributed regional development, many efforts were invested to upgrade the competences of existing universities outside Zagreb (Rijeka, Split and Osijek), and in establishing new universities in Zadar (2003), Dubrovnik (2003), and Pula (2006). Besides, many private and public schools of professional education have been also established to diversify and expand the higher education sector.

Although there has been a rapid increase in the number of institutions outside Zagreb, academic activities are still concentrated at Zagreb University. This university alone employed more than 50% of the Croatian academic staff. About 17% are engaged at Split University, while Rijeka and Osijek employ about 13% of academic staff each (see Table 4).

	Academic staff, FTE (ISCED 5 and 6) (total full time and part time employment)1)			
University	Total %			
Zagreb	4932	56.7		
Rijeka	1105	12.7		
Split	1036	11.9		
Osijek	958	11.0		
Dubrovnik	151	1.7		
Zadar	352	4.0		
Pula	161	1.9		
Total (A)	8695	100.0		
Polytechnics	478	60.5		
Colleges	299	37.8		
Private faculties	6	0.7		
Others	7	0.8		
Total (B)	790	100		
TOTAL A + B	9485	100.0		

Table 4 Number of teaching staff in universities

Source: Academic staff at the higher education institutions in 2010, Central Bureau of Statistics, First Release: No. 8.1.1. at 25 February 2011

Almost 50% of students are enrolled in the faculties of the University of Zagreb followed by Split (18%), Rijeka (12%) and Osijek (12%). The remaining 8% are enrolled in the new founded universities of Pula, Zadar and Dubrovnik.



Zagreb University produces also the largest number of PhDs, since out of the total of 572 graduated doctors of science in 2009, 77.6% of them obtained their degree at the University of Zagreb. The largest number of doctoral dissertations in 2009 was defended in the fields of SSH -36.7% (17.5% in humanities, and 19.2% in social sciences); followed by biomedicine and health -22.5%; and life sciences -18.4%. The remaining are in engineering, biotechnical science and in the interdisciplinary scientific field.

Table 5 Total number of students ISCED 5 and 6, all fields of education and in SSH, enrolled in 2008/2009

	TERTIARY (ISCED5/6)				
NUMBER OF STUDENTS (ISC 56)	TOTAL ALL TERTIARY (ISCED 5/6)		5A	5B	6
BY FIELD OF EDUCATION, PUBLIC AND PRIVATE INSTITUTIONS	All educational programmes	%	All educational programmes	All educational programmes	All educational programmes
Total: All fields of education	139069	100	92230	43737	3102
Education	5887	4	3445	2330	112
Teacher training	5175		2807	2330	38
Education science	712		638	n	74
Humanities and Arts	12547	9	11409	468	670
Arts	3603		3197	399	7
Humanities	8944		8212	69	663
Social sciences, business and law	59733	43	36092	23110	531
Social and behavioural science	3780		3499	n	281
Journalism and information	2273		2175	75	23
Business and administration	38753		20130	18472	151
Law	14927		10288	4563	76

Source: CBS, Unesco/OECD/Eurostat (UOE) survey 2010

All tertiary institutions, public and private, enrolled in the academic year 2008/2009 a total of 139.069 students. The majority of students (52%) are enrolled in social studies and humanities (Table 5). According to EUROSTAT, the number of graduates in 2008 was 26938 out of which 38% graduated in the field of social sciences, business and law, and 10% in humanities and arts.

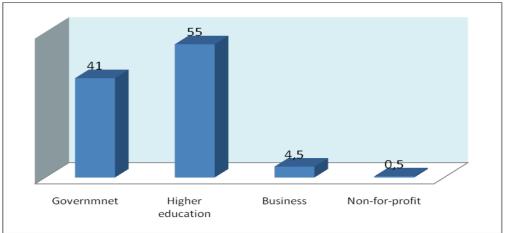
According to analyses (Babic. Matkovic, Sosic, 2006) the profile of professional education shifted over time from a technical-oriented to social sciences and humanities.



4.2.2 HEIs as research performers

The Higher education sector in Croatia made up 32% of total GERD (HERD) in 2009. It is thus the second in performing sectors after the business sector (BERD) with 40% and government sector with 27%. The majority of GERD for SSH is also performed by the higher education sector, usually around 55% (both in 2007 and 2009) while another 40%-41% was executed by the public institutes (GOVERD). It points to the fact that SSH are mostly performed by the public sector –universities and public institutes- which together performed more than 95% of all research in SSH (95% of GERD in 2007, and 96% in 2009) (Figure 5).

Figure 5 GERD for SSH by sector of performance (%), 2009



Source: Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010

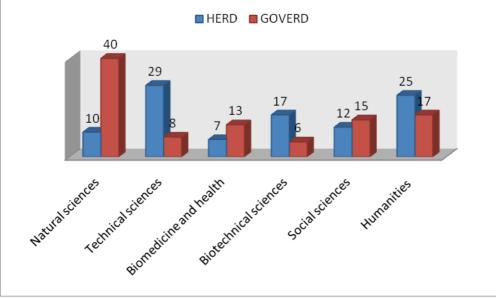


Figure 6 HERD and GOVERD by scientific fields (%), 2009

Source: Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010.



The higher education sector is the principal performer in humanities since it spent 62% of total R&D expenditure for humanities in 2009. In the social sciences, the principal performer is the government sector with 47% of total GERD for social sciences spent.

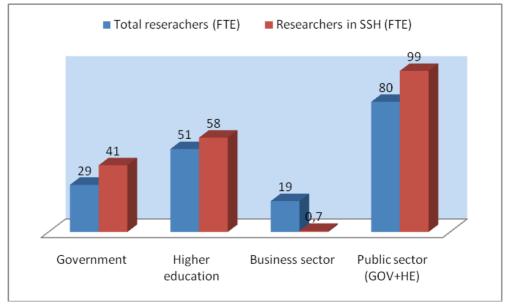


Figure 7 Researchers: Total and in SSH (FTE, in %), 2009

Source: Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010

In the domain of SSH 99% of researchers are employed in the public sector, of which 58% at universities, and 41% at government institutes (Figure 7). Only 0.7% is employed in the business sector, most probably in business consultation and management. The majority of researchers at universities are engaged in technical sciences (30%), while 29% are engaged in SSH. In the government institutes, the majority of researchers is in technical sciences (37%), followed by SSH with 34%.

The strongest track record in SSH research is in the faculties affiliated to the University of Zagreb. All of them are educational and research leaders in their respective fields. Zagreb University and their faculties usually have the greatest support of the government in research projects, research facilities, equipment and other infrastructural support, which has a strong positive impact on their performance.

4.3 Public Research Organisations

Croatia has 26 public research institutes whose prime task is to carry out the scientific programmes of strategic interest to the Republic of Croatia. The breakdown of the institutes according to their scientific areas of specialisation shows that the majority of the institutes, 15 out of 26, are in SSH (7 in social sciences and 8 in the humanities)

Institutes which activities are dominantly in the social sciences are the following:

- 1. Institute of Economics, Zagreb;
- 2. Institute for International Relations, Zagreb;
- 3. Institute for Tourism, Zagreb;
- 4. Institute for Social Research, Zagreb;
- 5. Ivo Pilar Institute of Social Sciences, Zagreb;
- 6. Institute of Public Finance, Zagreb;
- 7. Institute of Migration and Ethnic Studies, Zagreb;

The institutes, which activities are dominantly in the humanities, are as follows:

- 1. Croatian Institute of History, Zagreb;
- 2. Institute for Anthropological Research, Zagreb;
- 3. Institute of Archaeology, Zagreb;
- 4. Institute of Ethnology and Folklore Research, Zagreb;
- 5. Institute of Philosophy, Zagreb;
- 6. Institute of Croatian Language and Linguistics, Zagreb;
- 7. Institute of Art History, Zagreb;
- 8. Old Church Slavonic Institute, Zagreb.

The public institutes are the main performer in social sciences with 41% of all researchers employed in SSH, and 41% of total GERD spent thereon.



Institutes in Social sciences

All of public institutes in SSH are located in Zagreb while regional universities carry out a majority of research outside of Zagreb. The Institute of Social Sciences Ivo Pilar initiated in 1992 the regional centres for social research by establishing its subsidiaries in Dubrovnik and Split (Dalmatia) and then in Istria (Pula), Vukovar and Osijek (Slavonia), Gospić (Lika).

- The Institute Ivo Pilar is the largest institute of social sciences in Croatia which presently counts for more than a hundred employees. It was initiated in 1991. In addition to interdisciplinary basic scientific research in sociology, psychology, demography and anthropology, the Institute has a strong market orientation. The Institute publishes the Current Content referred scientific journal "Društvena istraživanja" (Social Research) and has published the highest number of scientific papers and publications in SSH in Croatia.
- The first institute of social sciences in Croatia is the Institute for Social Research (IDIZ) established in 1964. Presently it employs about 30 researchers engaged mainly in sociology of science and education. It participates in the International Social Survey Programme (ISSP).
- The Institute of Economics is the pillar of research activities in economics, business and management. It was founded in 1939 and has 24 researchers. In addition to the Faculty of Economics in Zagreb it is the highest authority for economic research in Croatia.
- The Institute for International Relations, Zagreb was established in 1963 and has over 30 researchers. It deals with interdisciplinary research and scientific analysis of crucial social and policy issues of international scope and global importance.
- The Institute for Tourism is the only scientific public institute in Croatia specializing in research and consultancy services in tourism established in 1959 by the Chamber of the Hotel and Hospitality Industry. It has 20 researchers who also established a Zagreb School of Management and Tourism Studies.
- The Institute of Public finance in Zagreb was established 1970. It has only 12 researchers but it is highly influential in all kinds of research related to public sector (governance, EU integration, the tax system and taxation, fiscal and pensions systems, public debt, the legislature in the budgetary process, etc). It publishes also a journal "<u>Financial Theory and Practice</u>" and other publications, usually resulting from conferences or projects financed by foreign and national foundations.
- The Institute of Migration and Ethnic Studies in Zagreb was founded in 1984. Presently it has 17 researchers engaged in scientific research of external and internal migration, Croatian emigration and minorities.

Institutes in humanities:

- The Institute of Croatian Language and Linguistics is established immediately after the 2nd World War, in 1948. It is the central Croatian scholarly institution for the study of the Croatian language, cultivation and tradition. Presently it employs 16 researchers and almost 40 research novices.
- The **Institute of Ethnology and Folklore Research**, Zagreb was also established in 1948 and nowadays ha about 50 employees.
- The **Old Church Slavonic Institute** was founded in 1952 to conduct research in language, literature and palaeography of the Croatian Glagolitic Heritage. Besides the specialised library it has also the prints and microfilms of almost all more important Glagolitic sources. It has 22 employees.
- The Institute of Archaeology, which presently has about 34 employees.
- The Croatian Institute of History with about 58 researchers.
- The **Institute of Philosophy**, Zagreb was founded in 1967 as a division of the Philosophical Faculty of the University of Zagreb. In 1991 it was registered as an independent research institute. It has about 40 researchers.
- The Institute for Anthropological Research was established as an independent institute in 1992, becoming thus the youngest scientific institution. The Institute was established following the reorganisation of the Institute for Medical Research and the Occupational Health of the University of Zagreb. It has about 20 researchers mainly engaged in research of numerous interactions of the biological and socio-cultural history affecting the structure of population in Croatia and neighbouring area.

In addition to the public institutes the most important institution for SSH is **the Croatian Academy of Sciences and Arts**, which has about 90 researchers and 40 doctoral students. The Academy should be distinguished from the remaining research performers in SSH since it gathers the most distinguished intellectuals in Croatia, especially in the domain of SSH. It is the highest authority in researching Croatian cultural heritage and its affirmation throughout the world.

The Academy consists of 9 departments out of which 5 are devoted to SSH and arts: the <u>Department of Social Sciences</u>, the <u>Department of Fine Arts</u>, the <u>Department of Literature</u>, the <u>Department of Music and Musicology</u>, and the <u>Department of Philological Sciences</u>. The departments consist of 28 research units of which 12 are in SSH, 5 museums and galleries, and 5 other units.

The <u>Department for Social Sciences</u> consists of 10 research institutes with a number of research unites and divisions. Since the department's beginning, a number of very distinguished members in the field of historical, legal, philosophical, and economic sciences have contributed to its work like Franjo Rački, Albert Bazala, Baltazar Bogišić, Juraj Andrassy, Mijo Mirković, as well as several corresponding members, including the Nobel Laureates Ian Tinbergen, and Herbert Simon. The Department encompasses historical



sciences and archaeology, law, sociology, political sciences, philosophy, economy, and demography. The Department is in charge of long-term research such as history of Istria, Dubrovnik, Dalmatia, the Croatian Medieval Law, Demographic History; scientific valorisation of the Cultural Heritage of Salona, a Dictionary of Croatian Legal and Administrative Terms, etc.

Entities in composition of the Department are, as follows:

- <u>The Institute of Historical and Social Sciences in Zagreb</u>
- The Institute for Scientific and Artistic Work in Rijeka
- <u>The Institute for Historical Sciences in Zadar</u>
- <u>The Institute for Historical Sciences in Dubrovnik</u>
- The Juraj Križanić Cabinet of Legal, Political and Social Sciences
- The Institute for Scientific and Artistic Work in Split
- <u>The Adriatic Institute</u>
- The Institute for Scientific and Artistic Work in Osijek
- <u>The Institute for Scientific Work in Varaždin</u>
- <u>The Institute for Scientific and Artistic Work in Bjelovar</u>

The philological sciences have been a concern of the Academy since its very beginning and the Academy's original aim was to "care for the study of language and literature". The research is carried out within the <u>Department of Philological Sciences</u> which encompasses <u>the Linguistic research</u> <u>Institute</u>. The <u>Department of Literature</u>, which includes <u>the Institute for the History of Croatian Literature</u>, Theatre and Music, has been simultaneously studying and publishing Croatian literature from its beginning to the present.

4.4 Private research performers

Research in the domain of SSH in the private sector is mainly related to small consulting companies like <u>TEB consulting</u>, <u>Appono consulting</u>, <u>Filaks</u>, or <u>AC Associated Consultants</u> which provide business, financial and accounting services, marketing and public relations, studies on regional or sector development, etc. In addition, there are several small companies, which provide market and public opinion research like <u>Puls</u>, <u>Target</u>, <u>Promocija plus</u>, etc. These consulting companies provide also quantitative and qualitative data analysis and methods for the "third parties" such as content analysis, desk research, statistical modelling and analysis, in-depth interviews, focus groups, etc.

There is only one private research centre recorded in the Register of research entities of the Ministry of Science, Education and Sport: the <u>Political</u> <u>Science Research Centre</u>.

4.5 Research performance

4.5.1 Scientific publications

The share of scientific publications in the domain of SSH amounts to 32% of scientific publications in all scientific fields as recorded by the <u>Croatian</u> <u>Scientific Bibliography</u> (CROSBI)⁸, a database that stores the entire scientific production of Croatian researchers. Due to the different types of scientific production, the social sciences contribute more to papers in the "Current Content" (CC) journals (48% of total),while humanities contribute more to publishing of books and books' chapters (35% of total).

In the field of social sciences 65 journals are published in Croatia and the number of journals in humanities is 79.

The visibility of the Croatian scientific production in international science communication is constantly growing since 2000 as measured by the number of journal articles in all scientific disciplines cited in the Current contents and the Web of Science. The increase is due to the fact that more Croatian journals are included in the database.

If one takes the **SCImago Journal and Country Rank** as the source, the share of Croatia to scientific productivity in the Arts and Humanities in the period 1996-2009, has grown from value 5 to 7 in the region, and from 0.04 to 0.19 in the world, mainly owing to the increased number of publications in philosophy, language and linguistics, history and archaeology. In the same period, the Croatian share in social sciences has decreased from 27.63 to 15.74 in the region, while the world's share is constant at about 0.4. The increase in publications is mainly in anthropology, geography education and social science (miscellaneous).

⁸ Since 1996, CROSBI stores all the literature produced by Croatian scientists: journal articles, books, book chapters, textbooks, conference papers, theses, reports, manuscripts, etc., where scientists themselves provide the data into the database. According to this bibliography, from 1996 to 2008 the total number of publications in social sciences was 35059, of which 1335 were monographs, 459 editor's books, 893 journal articles cited in CC (Current Contents). In humanities, the total number of publications in the period of 1996 to 2008 was 36939, of which 1847 are author's books, 629 editor's books, and 504 journal articles cited in CC.



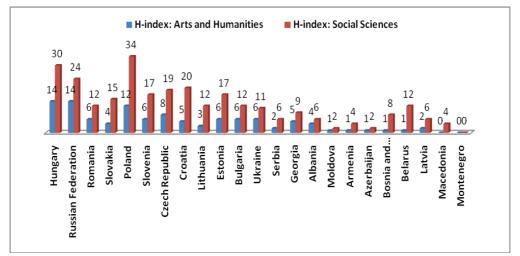


Figure 8 H-index, Eastern Europe, 1996-2009

Source: SCImago Journal and Country Rank, 1996-2009.

The SCImago H-index scores Croatia high among the 23 Eastern European countries for both humanities and social sciences. In the field of **humanities**, Croatia obtained an H-index value of 8, ranking the country on the 3rd place for 1996-2009. In **social sciences** Croatia is on the fourth place with an H-index of 20 after Hungary, Poland and the Russian Federation (Figure 8). However, in 2007 it shared the third place with Hungary.

4.5.2 International Cooperation

Joint R&D initiatives including SSH of the Croatian research institutions and foreign partners outside and inside Europe are mainly carried out in the framework of <u>bilateral research agreements</u> administrated by the Ministry of Science, Education and Sports. The majority of these projects (around 200 in 2010) were agreed with EU countries and a dozen with the USA. During the past three years, an increase of such framework agreements with non-European countries like India, China, Albania, FYR of Macedonia and Serbia has been reported by the Ministry.

The cooperation between Croatia and the non-EU countries in the domain of SSH are mainly related to the establishment of lecturer positions (lektorati) and Croatian classes abroad. There are 33 lecturing positions in the Ministry's jurisdiction worldwide, with over 1,000 students attending classes of Croatian language and literature. As reported by the Ministry, in the academic year 2006/2007, a Croatian lector began working at the Faculty of Philosophy at Lomonosov State University in Moscow. Also, an agreement has been reached with the Faculty of Philosophy at the University of Buenos Aires (UBA) to open the Croatian Language Department, the first Croatian lecturing in South America. From 2003 to 2006, 90 teachers in 285 educational positions taught the Croatian language, history and geography to over 6,500 students in 19 countries. The centres for the Croatian studies are established in Australia and Canada.

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There are some agreements at individual level such as the long-term cooperation of the University of Zagreb and Indiana University, Bloomington, USA (established in the 1980s). This has resulted in developing new areas of research in English language and literature and sociology. Another is the framework agreement between the public research institute Ivo Pilar and the US-based Georgia University.

4.5.3 Main prizes

Scientific awards in the field of social sciences and humanities are mainly granted by the three institutions:

- the Ministry of Science, Education and Sports (MSES);
- the National Foundation for Science, Higher Education and Technological Development (NZZ); and
- the Croatian Academy of Sciences and Arts (HAZU).

The awards are complemented by awards granted by universities, various foundations and the cities. The awards are granted in different subcategories, one of which is usually social sciences and humanities. They are aimed at the population of senior and junior scientists, undergraduate, graduate and postgraduate students that are citizens of Croatia.

Prize 1:

The National Science Awards of the Republic of Croatia are granted to scientists, researchers and junior researchers in recognition of their exceptional achievements in scientific research, new scientific discoveries and scientific accomplishments made by implementation of the results of scientific research. There are four types of the National science awards:

- The Lifetime Achievement Award is granted to outstanding scientists in recognition of their scientific and research activities and contribution to broadening scientific knowledge and implementing the results of scientific research. Up to six Lifetime Achievement Awards are presented annually.
- The **Annual Science Award** is granted in recognition of an outstanding scientific discovery, scientific discovery and implementation of the results of scientific research. Up to three Annual Science Awards are presented for each scientific field.
- The Annual Award for Popularisation and Promotion of Science is granted in recognition of contribution to broadening scientific knowledge, which is demonstrated by a popular presentation of valuable professional and scientific publications and other forms of presentation. Up to three Annual Awards for Popularization and Promotion of Science are presented each year.
- The Annual Award for Junior Researchers is granted to the young scientists who stand out for their scientific excellence, to those who had their book published or whose article has been well received in an internationally recognized scientific journal or in a journal of the same quality level. Up to six Annual Awards for Junior Researchers are presented each year.



Prize 2:

The <u>Science Award</u> is granted by the National Foundation for Science (NZZ). Its objective is to promote undergraduate and graduate students who have published research papers during their study in Croatia. The award is granted in three categories: Natural and biomedical sciences, technical and biotechnical sciences, humanities and social sciences.

Prize 3:

The "Josip Juraj Strossmayer" Award is a joint initiative of the Zagreb Fair and the Croatian Academy of Sciences and Arts since 1989. The award aims at scientific works in Croatian language, humanistic sciences, technical sciences, medical sciences, natural sciences and information sciences. The Awards Committee consists of academy members.

Prize 4:

The <u>Professor Dr Marijan Hanžeković Foundation Award</u> is the only award provided by a private foundation for articles and review articles in the domain of public economic sector, primarily in Croatia, as well as in Central, Eastern and South-Eastern Europe. Croatian and foreign researchers and students are eligible to submit their works.

Prize 5

The Universities of Zagreb, Zadar, Osijek, Split, Rijeka, Pula and Dubrovnik annually grant their **Rector's Award** to the best students and for achievements in Science and Arts.

References

- [1] Babic, Z., Matkovic, T., Sosic, V. (2006), Structural Changes in Tertiary Education and Impacts on the Labor Market, Privredna kretanja i ekonomska politika, Vol. 16., N0.108, 2006
- [2] Baðun, Marijana (2009), Pension beneficiaries who are entitled to a pension achieved under favorable conditions, Institute of public finance, Newsletter no 44, August 2009, p. 1-8.
- [3] CBS (2010), Research and Development in 2009, Central Bureau of Statistics, First Release: No. 8.2.1. at 29 October, 2010
- [4] CBS (2011), Labour force survey in the Republic of Croatia, third quarter of 2010, Zagreb, January 19 2011, Number: 9.2.7/3.
- [5] MSES (1996), National Scientific and Research Programme (1996-1998), MSES, Zagreb
- [6] Obadić, Alka; Smolić, Šime (2007), Analysis of the working population and economic activityof the Croatian population, Faculty of Economics, University of Zagreb (In Croatian: Analiza radnog kontingenta i ekonomska aktivnost stanovništva Hrvatske), Ekonomski fakultet, Sveučilište u Zagrebu, Zagreb
- [7] OECD/MSES (2007), Thematic review of tertiary education: Country background report for Croatia, OECD/MSES, April 2007, p.54-69.