

Policy Issues of the International Productivity and Visibility of the Social Sciences in Central and Eastern European Countries

Franc Mali

*University of Ljubljana
Faculty of Social Sciences
franc.mali@fdv.uni-lj.si*

ABSTRACT The contribution deals with the issue of the international productivity and visibility of the social sciences in Central and Eastern European (CEE) countries. The reasons why the social sciences in CEE countries lag behind in being more internationalised stem not only from the past, but also the present. The intellectual potential of the social sciences is often neither fully acknowledged nor effectively used by different groups of social actors. There is also a lack of institutional support from R&D policy decision-makers to encourage social scientists to publish more abroad and to establish excellent networks beyond national borders. In the paper, the main focus is national R&D evaluation systems. R&D evaluation systems play a crucial role in the allocation of financial support to scientists, the promotion of individual scientific careers, ensuring disciplinary (or interdisciplinary) standards etc. Last but not least, it is impossible to fully understand the state-of-the-art in the social sciences' international productivity and visibility in CEE countries without explaining the context of how these national R&D evaluation systems function. Some analytical data are used to illustrate the international orientation of social scientists. These data warn that the great expectations that social scientists from this part of Europe would easily "break through" into publication channels in the West and thereby have a big scientific impact have yet to be realised.

Key words: social sciences, international productivity and visibility, R&D evaluation system, bibliometrics, peer review, co-authorship, publications.

Received in December 2010

Accepted in March 2011

Introduction

The main goal of the contribution is to address some issues of the international productivity and visibility of the social sciences in Central and Eastern European (CEE) countries. To illustrate the situation faced by the social sciences in this part of Europe, both comparative quantitative data and the results of some case studies will be used. The results of the case studies mostly concern Slovenia, but the issues discussed are also typical of most of other (small) CEE countries. In those countries, relatively closed and locally oriented communities of researchers can also be found.

Our main thesis is that national R&D evaluation systems play a crucial role in increasing (or decreasing) the degree of internationalisation of the social sciences in CEE countries. We are aware that the idea of scientific internationalisation remains quite unspecified. Namely, it is difficult to differentiate between its many possible meanings which, in turn, depend on theoretical or methodological contexts. What does the concept of scientific internationalisation embrace? Does internationalisation refer to the level on which research problems are defined and framed, to the collaboration in which knowledge production takes place, to the wider networks one is part of, or the international visibility of the publication venue?

Despite the many open questions surrounding the concept of internationalisation in science, for CEE countries the orientation of researchers to the international arena must be a priority. That is also the best way to improve the quality of scientific output at home. In the past, in this part of Europe political factors pushed especially social scientists into intellectual isolationism and parochialism. After two decades of a transitional period, the time has come to go one step further! All around the world, various forms of international scientific co-operation are growing. There are great expectations that such types of co-operation will bring many intellectual benefits through the cross-fertilisation of ideas which have previously been unconnected. International co-operation has recently been becoming a collective undertaking that does not rest solely on the individual motives of researchers as was the case in the past, but on long-term links between research teams and institutions. To paraphrase the words of English analyst of science John Ziman, through the new forms of international co-operation of science the traditional cosmopolitan individualism of science has gradually been transformed into transnational scientific collectivism (Ziman, 1994).

In the first part of our discussion, we present some reasons for the social sciences in CEE countries lagging behind in internationalisation. Here, it is important to keep in mind that these reasons stem not only from the past, but also the present. Unfortunately, in many CEE countries the social sciences still do not have appropriate R&D policy support. In the second part of our discussion, we will present some data to demonstrate that the social sciences in this part of Europe only record a relatively low international publication and citation performance. Finally, we will focus on national R&D evaluation systems which play a very important

role in encouraging the internationalisation of the social sciences. They are encountering several crucial dilemmas: how to find a balance between bibliometrics and peer review, how to ensure the unbiased use of bibliometrics in the social sciences, which criteria to apply in the evaluation of transdisciplinary science? A lot of former empirical analysis has already shown that in CEE countries research productivity in all fields of science depends significantly on the current system of material and social conditions of scientific work and production, including scientific institutions, projects and financial resources, the division and organisation of tasks, social networking, as well as the cognitive style of the research field (Prpić, 2007).

Some reasons why the social sciences in CEE countries lag behind in internationalisation

One reason for the social sciences in CEE countries lagging behind in internationalisation is the heritage of the past. In the former communist era, the social sciences were closed within the framework of their national borders and ideologies. They were characterised by autarky. "Research quality was also adversely affected by international isolation, which shielded individual researchers and entire fields of research from the scrutiny of outsiders" (Frankel and Cave, 1997:1). The position of the social sciences in the former communist era was not totally monolithic. For example, big differences existed between the openness of the social sciences in former Yugoslavia and the other CEE states which were then members of the Soviet bloc. In many countries of the former Soviet bloc travel to Western countries "...was simply a miracle for the average scientists, because this opportunity was available only to top scientific administrators and to very few trusted elite scholars" (Mirskaya, 1998:108). The situation was rather different in former Yugoslavia (Prpić, 2007). From the end of the 1950s onwards social scientists did not suffer a lot due to isolationism. Already in the 1960s, a significant share of social scientists from Zagreb or Ljubljana had acquired additional professional training at Western universities and scientific institutes (Mali, 2003). Despite these differences among the former communist countries, what their social sciences did share was parochialism. The Communist Party's political domination left little room for the autonomy of social scientists, especially in disciplines such as political science, sociology and economics. They were extremely over-politicised (Holm et al., 2009; Schiermeier, 2008; Dyker and Perrin, 1997). A consequence of such ideological pressure on the social sciences was that their research results were mostly only published in domestic journals and publishing houses with low scientific quality and strong political control.

Following the political turn at the beginning of 1990, CEE countries have retained the relatively low international visibility and productivity of their social sciences compared with Western Europe. Reasons for that include that fact that the social sciences have not been among the R&D policy priorities. Their intellectual potential is often neither fully acknowledged nor effectively used by politicians,

businessmen, civic social groups etc. The growth of neoliberal ideology after the political turn in some CEE countries has also not contributed to the social sciences achieving a better position in this part of Europe. The vulgar neoliberal ideology about the impossibility to gain epistemological mastery over the complexity of self-organising social phenomena and about the need to trust the free market undermined the very *raison d'être* of social sciences knowledge. If at all, then the relevance of the knowledge produced by the social sciences has been declared more at the level of political slogans than in reality. “Social sciences in CEE countries are given a low position in the funding hierarchy by decision-makers, similarly to the low priority given by distributing funds to sciences” (Kovacs and Taras, 2010:217). Such a socio-political atmosphere in which the social sciences in many CEE countries have been operating in the last 20 years has not stimulated the internationalisation of the social sciences.

It is also true that the deeper epistemological background of the social sciences is factor in the low degree of internationalisation, especially when compared with the natural sciences. Although it would be a simplification to present the cognitive structures of the social and natural sciences in a bipolar manner, undoubtedly we can observe some important differences between them. They have different patterns of behaviour in terms of internal cognitive factors which include, among others, the paradigmatic status of the discipline (single versus multiple paradigms), communication language (codified versus literary), the audience structure (specialists versus literature) and the nature of the topic (local versus global). The outcome is that two researchers operating in the same discipline but in various countries are perhaps more internationally oriented than two researchers operating in the same country but in different disciplines. The difference in research infrastructure costs is an additional factor of the polarity between the social and natural sciences. In the second half of the 20th century the natural sciences witnessed the emergence of what is called “big science” (Price, 1963). That does mean that the progress of certain disciplines requires research instruments that exceed the normal finance sources because of their size and cost (Biagioli, 2003; Cronin, 2001).¹ Unlike the situation in the natural sciences, it seems that in the social sciences libraries and archives are an icon of research infrastructures. It is also true that they are both radically changing in this era of the digitalisation of scientific information.

¹ Let us take the example of big international projects in experimental particle physics such as the Large Hadron Collider (LHC) programme at CERN. This programme began in 2008 and includes large experimental projects such as ATLAS with 2,000 collaborators or ALICE with 1,000 collaborators from all European countries. It has brought the biggest challenge to traditional norms of authorship. The modern practice of international hyper-authorship in such physical programmes introduces considerable difficulties into traditional procedures of publications in science. An issue is arising of who is responsible for the integrity of the research project, how to organise the evaluation of individual contributions to the common research result, how to organise the final publication of the research results etc (Braun-Munzinger, 2009).

Although in the first decade of the 21st century the EU has become a very important actor in the direction taken by CEE countries' R&D policies, it seems that the internationalisation of the social sciences is still crucially dictated by national factors. As part of institutionalised national R&D policy strategies, external R&D evaluation systems in the national framework still decisively define "the rules of the game" for social scientists in Europe. Notwithstanding this, the importance of Brussels in the processes of integrating the social sciences at the European level cannot be ignored. Although in the first periods of the common EU policy the social sciences remained in the background of these integration processes at the European level, in the period of the implementing the R&D "philosophy" called the new "European Research Area", the European Commission established an overarching model of various types of multilateral co-operation for all fields of science. The social sciences have started to witness the implementation of common EU programmes in which new methodologies and theoretical perspectives have been elaborated, there is a search for niches in interdisciplinary social science research, and new approaches to data analysis have been developed. These new forms of scientific co-operation have begun to encourage social scientists from new EU member and EU candidate states to extend their R&D efforts across national borders. As noted by many analysts, the social sciences in Europe are entering a new phase of comparative collaborative research and exchange of academic research cultures (Felt, 2009; Mattsson et al., 2008). Nevertheless, in our view social scientists from CEE countries are still far away from the compatible working conditions enjoyed by their professional colleagues in Western European countries. The former often confront an extremely different domestic R&D policy framework. In that sense, the 20 years of a transitional period in the CEE region is probably not long enough to close the gap between these two parts of Europe.

Publication and citation performance of the social sciences in CEE countries

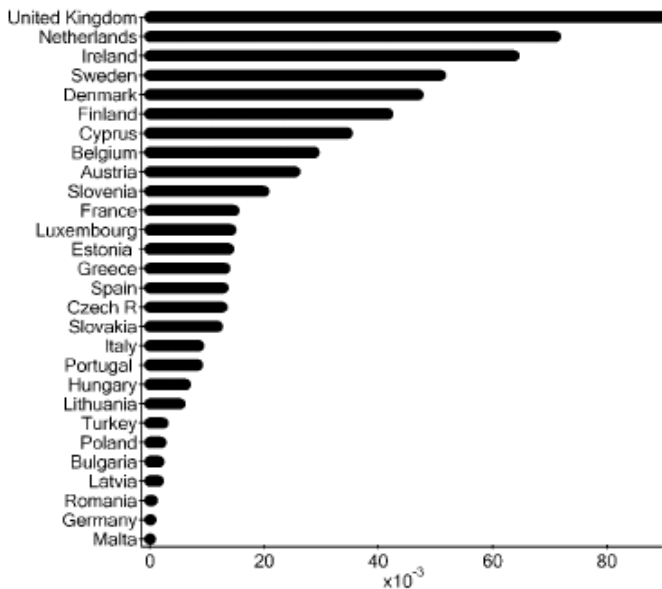
It is usually very difficult to access all relevant data to illustrate the internationalisation processes of the social sciences in CEE countries. This mainly concerns the lack of empirical data within the framework of long-term series. Unfortunately, we also could not obtain all relevant data to allow a more profound overview of the internationalisation of the social sciences in the CEE region. Although the figures presented below are not entirely coherent, some of them do illustrate very well how the social sciences in CEE countries are lagging behind in internationalisation processes.

Publications in international journals, books etc. are still the "be all and end all" when indicating international academic scientific excellence. Publications in journals and books are central to scholarly activity and recognition, and widely regarded as a main source of R&D evaluation and a way of obtaining competitive research funds. In the academic world, it can be argued that research activity only

becomes “a work” when it takes on the conventional, physical or electronic form of various types of publications (for example, see: Hicks, 2004; Hornbostel, 1997). International publications in science can be observed from two sides. In some cases, they are a first step towards an international reputation which can in the next stage promote a scientist’s entry to international “networks of excellence”. In other cases, they already represent the final stage of previously established formalised mode of scientists’ cross-border co-operation.

CEE countries still have quite a lower rate of scientific publications in peer-reviewed journals per million population than most Western European countries (EU Science, Technology and Competitiveness Key Figures Report, 2009). The same holds true for social science publications from CEE countries which are indexed in the Thomson Scientific – ISI databases. As Figure 1 shows, in terms of papers in scientific journals indexed in the Social Science Citation Index (SSCI) database most new EU member states are at the lower end of the spectrum, even though during the 2000-2007 period they had a much higher average annual growth rate of publications compared to the old EU member states.

Figure 1.
SSCI publications per capita in EU member states in the 2000-2007 period



Source: Gossart and Ozman, 2009:325²

² The figure includes data for Turkey because Gossart and Ozman (2009) compared scientific publications indexed in the Social Science Citation Index (SSCI) between Turkey and a group of 27 EU countries.

In 1997, 118 journals from CEE countries were included in the ISI Journal Citation Report (ISI JCR).³ In the ISI JCR, the share of journals from CEE countries included in the SCI database was higher than the share of journals included in the SSCI database. At that time the impact of these journals was low and they were not widely cited (the impact factor of just three journals exceeded 1.0) (for example, see: Must, 2006). Since 2008 the Thomson Scientific – ISI has applied a modified evaluation strategy for the inclusion of new scientific journals by adding the so-called “regional diversity” criterion to the old ones, with nearly 1,000 new journal titles (mostly published in non-English languages) thereby being added *en masse* to its databases. This means that Thomson Scientific – ISI began to be increasingly submitted to commercial pressure and the pressure of editorial boards of certain scientific journals. Let us take the example of Slovenia. Before Thomson Scientific – ISI changed its evaluation strategy in 2008, the ISI JCR included one single journal in the social sciences field from Slovenia (*Javnost/The Public*). At that time in Croatia the number of social science journals included in ISI JCR was three times higher than in Slovenia. Croatian social science journals also had a higher impact factor (for example, see: Sambunjak et al., 2008). After Thomson Scientific – ISI changed its evaluation strategy six more journals from Slovenia were added to the ISI JCR.⁴ The result is that even R&D policy decision-makers in Slovenia are currently relatively confused about how to interpret the quality of these locally oriented and for social science unrepresentative journals which have been additionally included in the ISI JCR (Kramberger and Mali, 2010).

Many observers dealing with the position of the social sciences in CEE countries have concluded that some representative social science disciplines are not ranked as high as would be expected. It seems that the great expectations after the political turn in 1990 that these disciplines would easily publish the results of research in the most reputable Western journals have been not entirely realised. Let us consider the example of sociology. Janusz Mucha and Mike Forrest, editors of the book “Sociology in Central and Eastern Europe” (2003) used a group of provisional indicators to show that sociology from this part of Europe in the first transitional period (1990-2000) was strongly underrepresented in the most prominent Western sociological journals.⁵

³ The ISI Journal Citation Report, produced by Thomson Scientific – ISI, is a database that presents quantifiable statistical data on the impact of the world’s leading journals and their influence in the global research community. Among other things, it enables information to be gathered on the venue of publication of these journals.

⁴ In 2009, the following social science journals from Slovenia were added to the ISI JCR: *Annales (Anali za istarske in mediteranske studije)*, *Pedagoska Obzorja (Didactica Slovenica)*, *Journal of International Relations and Development*, *Slavistična revija*, *Geodetski vestnik*, *Acta Histriae*. At the same time, Croatia was represented with twice as many (12) journals.

⁵ The book includes national reports about the development of sociology in 11 CEE countries: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

We repeated the empirical survey with the same type of indicators for the 2001-2009 period. Our empirical analysis reveals that the number of papers by scientists from the CEE region published in the selected group of sociological journals did not change considerably in the second period.

Table 1

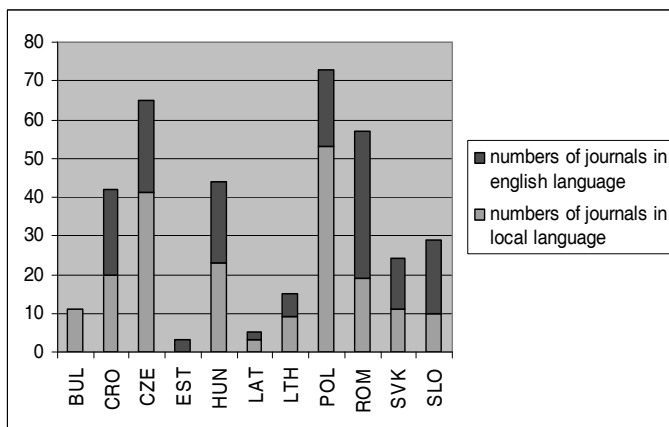
Number of articles by authors from 11 CEE countries in selected sociological journals in two periods (1990-2000 and 2001-2009)

JOURNALS	YEARS	
	1990-2000	2001-2009
American Sociological Review	3	0
American Journal of Sociology	1	2
British Journal of Sociology	1	2
Sociology	0	1
Kölner Zeitschrift für Soziologie	1	3
Zeitschrift für Soziologie	1	1
Revue Française de Sociologie	0	0
International Sociology	21	10
European Sociological Review	10	6
European Societies (since 1999)	2	12

Of course, in the field of the social sciences the role of important media in knowledge transmission abroad is not only played by the most prestigious journals. In that sense, it is very important for CEE countries to have social science journals available in which researchers can publish articles in the English language as well, although these (mostly bilingual) social science journals are not necessary recorded by most prestigious bibliographic indexes in the world. The possibility of publishing in the English language even in national journals often breaks the professional isolation of social scientists in this part of the world and improves information flows in both directions: from East to West and from West to East. It seems that the trends to achieve greater international visibility through publications in the English language even in national journals have recently been growing stronger in many CEE countries. Data obtained from the GESIS SocioGuide archive (see Figure 2 below) reveal that in the group of 11 selected CEE countries between one-third to one-half of all social science journals already publish articles in the English language as well.⁶

⁶ The GESIS SocioGuide databases offer on-line information in the field of the social sciences: profiles and descriptions of journals, institutions, scientific events and conferences, as well as information about networks and collections (GESIS, 2010).

Figure 2
Number of social science journals in 11 CEE countries



Source: GESIS – SocioGuide archives

Citations are also a good indicator of the international visibility of social scientists. In scientometrics, the citedness of scientific agents (individual researchers, research institutions) has for decades been regarded as an indicator of scientific impact. Although views differ widely on citation as a measure of scientific impact, especially amongst advocates of the purely qualitative peer review, this quantitative measure is frequently applied to evaluate and rank the international research performance of scientific fields in individual countries.

Looking at the international visibility of the social sciences in 11 CEE countries through the number of citations, again only relatively unsatisfactory results are seen, even when we use a less restrictive citation database than the SSCI. Namely, we obtained data about the citedness of the social sciences in CEE regions from the SCImago Journal & Country Rank (SCImago, 2010). This is an on-line portal that includes journals and country-specific scientific indicators developed from the information contained in the Scopus database.⁷

For our analysis we employed three indicators from the SCImago Journal & Country Rank: the number of citable published documents; the number of citations; and the citations per published document. As Table 2 shows, in the group of selected

⁷ The Scopus database was launched in 2004 and is the largest citation database containing both peer-reviewed research literature (the largest collection of non-English titles) and quality web sources. For that reason, it very well represents the overall structure of the social sciences on the global scale. With over 18,000 peer-reviewed journals from more than 5,000 international publishers it offers now more than 38 million records, nearly 15 million with cited references.

11 CEE countries Croatia had the highest number of citable publications in the social sciences field. Poland had the most citations in the same period (1996-2009). Poland also had the highest number of citations per publication. It is interesting that Slovenia is one of the CEE countries with the highest number of citable published documents. However, the rate of citedness of individual documents is very low.

Table 2

Citation performances in 11 CEE countries in field of the social sciences in the 1996-2009 period

CEE COUNTRIES	CITABLE DOCUMENTS	CITATIONS	CITATIONS PER DOCUMENT
Bulgaria	350	644	2.69
Croatia	3196	5959	2.23
Czech Republic	1332	3225	2.76
Estonia	488	1599	4.89
Hungary	1962	5555	3.61
Latvia	82	160	2.34
Lithuania	465	840	2.10
Poland	2377	8798	5.14
Romania	639	897	3.62
Slovakia	519	1276	3.85
Slovenia	1626	2266	2.06

Source: SCImago Journal & Country Rank, 2010

A comparison of the citation performance of the social sciences in CEE countries with Western European countries generally reveals they are lagging behind. Let us present only the indicator “number of citations per published document”: the Netherlands (9.05), Sweden (8.10), Belgium (7.87), Denmark (7.66), United Kingdom (7.17), Finland (6.93), Norway (6.57), Portugal (6.62), Austria (6.31), and Germany (5.86).

An empirically very robust indicator for measuring the internationalisation of the social sciences is the number of publications co-authored by social scientists from various countries. In the last few decades, in both science policy discourses as well as the way scientists describe their being part of a scientific community the science network metaphor seems to be omnipresent. Co-author networks, co-citation networks, networks of excellence are only a few examples which show how

scientists are increasingly tied together today. Especially international scientific co-authorship collaboration can be considered a means for enhancing scientific visibility and productivity. For example, the number of cross-national publications in the social sciences grew strongly in the second half of the 20th century (Wagner and Leydesdorff, 2005; Wagner, 2005; Lukkonen, Persson and Siversten, 1992).

Many bibliometric analyses have shown that scientific articles stemming from international collaborations are cited more frequently, on average, than scientific articles produced within national collaborative projects (Hoekman, Koen and Tijssen, 2010; Wuchty, Benjamin, and Brian, 2007; Lee and Bozeman, 2005). Already the research by Diana Crane on “invisible colleges” in the early 1970s underlined the positive effect of scientific collaboration on the diffusion and advancement of knowledge (Crane, 1972). She emphasised that the most important way in which international scientific collaboration can be analysed is to look at co-authored publications. It is difficult to obtain comparative data on co-authorship collaboration for social scientists in the group of 11 CEE countries. Accordingly, we only present the results of an interesting case study regarding the sociological discipline in Slovenia. Three types of indicators were observed in this study for the 1987-2007 period: single-authored publications of sociologists in Slovenia; their multi-authored publications with Slovenian co-authors; and their multi-authored publications with non-Slovenian co-authors (for more, see Mali et al., 2010).

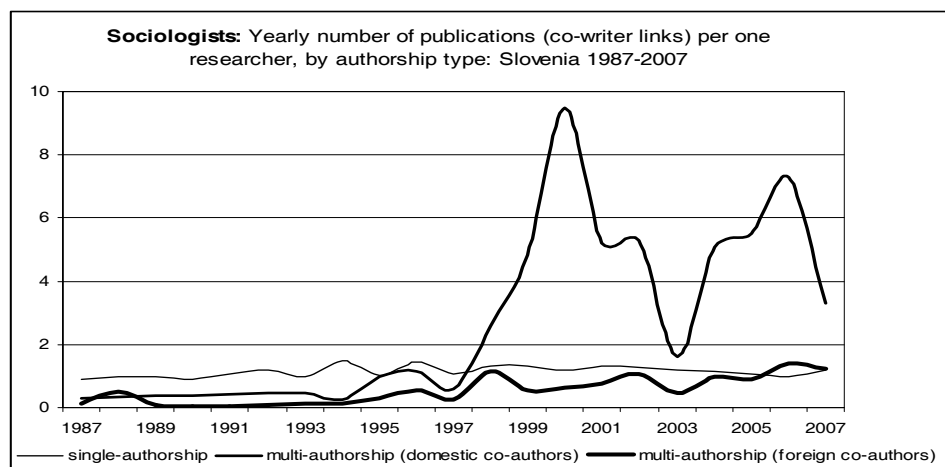
The graphs in Figure 3 show that the average number of single-authored publications did not change much remaining quite stable during the whole period under observation, with only small fluctuations around the value of one. On the other side, co-authored publications increased slightly but with a differentiated pattern: multi-author domestic output (per author) rose significantly since 1996, having a peak in 2000 (above nine) and again in 2006 (above seven), while multi-author (most likely) foreign output (per author) changed only a little during the whole period. It started with a small mean value of 0.1 in 1988, reaching a “threshold value” of 1.1 (one such type of publication per author per year) only in 1998, and has basically been fluctuating around this value since then. This means that the average number of international co-authored publications of sociologists in Slovenia practically did not change during the whole period.

The data about the low number of international co-authored publications of sociologists in Slovenia are in line with the additional finding that sociologists work in “small world” networks with their professional colleagues who are located nearby.⁸ This group of sociologists is prevalent in Slovenia. Contrary to the group of sociologists which is very locally oriented, the group of sociologists which invests great efforts to establish international scientific contacts and publish excellent pub-

⁸ According to recent social network analysis, the organisation of networks has important implications in terms of the performance of scientists working within or across national borders (Lambiotte and Panzarasa, 2009; Koen et al., 2009).

lications abroad is considerably smaller. If this small group of research “stars” not only accumulates a number of international research contacts in accordance with the principle of preferential attachment, and also has a much higher rate of excellent international publications, this does not mean that its “voice” is heard in national R&D policy discussions. The locally oriented sociologists are much louder in these discussions. They are strongly committed to rhetoric about the threat of the internationalisation of the social sciences and the humanities for national identity. Of course, this type of rhetoric of needing to protect domestic expert language in science has recently sounded extremely anachronistic. Given recent globalisation processes, it is expected that social scientists in a small scientific community would be strongly oriented to the international arena.

Figure 3
Authorship type of publications by Slovenian sociologists in 1987-2007 period



Source: Kramberger and Mali, 2010:200

Some dilemmas of national R&D evaluation systems

As noted in the introduction, national R&D evaluation systems play the central role in how the social sciences function. They have a crucial role in the allocation of financial support to scientists, the promotion of individual scientific careers, ensuring (inter)disciplinary standards and similar policy issues. We cannot fully understand the trends in the international productivity and visibility of the social sciences in CEE countries without locating them in the context of the functioning of national R&D evaluation systems.

One could say the national R&D evaluation process is realised in practice at two levels. The first regards the prevalent academic culture of a singular (national) scientific community. The second refers to the externally organised R&D evaluation

system promoted by governments (states) which are responsible for distributing budget funds to the public R&D sector. The international productivity and visibility of the social sciences in CEE countries depends on both types of R&D evaluation systems.

Laying at the heart of the idea about the academic culture of the scientific community is the self-organising capacity of “invisible colleges” of like-minded scholars to ensure the commitment to high professional standards in evaluation procedures. “Within the community of sciences, value systems and ideologies exert an influence on the research carried out and also how the research is evaluated” (Hemlin, 1996:214). The basic assumption of a high academic culture in science is that the scientific achievements of every member of the scientific community are based on the knowledge of all, and that the judgement of every single member in the scientific community is conditioned by the judgement of others.

Below, we will pay attention to the externally organised R&D evaluation system. External R&D evaluation systems as part of organised governmental policy efforts crucially define “the rules of the game” in (national) scientific communities⁹. External R&D evaluation systems have become a basic instrument for selecting research proposals, channelling funds, adjudicating scientific authority etc. The audit culture which has come to dominate publicly funded research has fostered the establishment of various types of external R&D evaluation models. This has resulted in a significant increase in controversial discussions about the application of these models in practice.¹⁰

The transition period in CEE countries has also witnessed the use of more modernised forms of external R&D evaluation procedures. They have gained more experience and knowledge about the use of various R&D evaluation models. For example, in practically all CEE countries various types of scientific intermediary structures have been created (METRIS, 2010). In most CEE countries, research agencies and councils as new forms of intermediary structures were created already in the mid-1990s and have constructed their own systems of ex ante evaluations. In this way a change in R&D policy discourse has emerged in

⁹ Richard Whitley defined external research evaluation systems as “...organized sets of procedures for assessing the merit of research undertaken in publicly-funded organizations that are implemented on a regular basis, usually by state or state-delegated agencies” (Whitley, 2007:6). If we look at the situation in CEE countries, social science research is almost completely an affair of the public sector. In countries such as the Czech Republic, Slovenia, Slovakia and Croatia more than 90% of research in the field of the social sciences is performed in the public sector (for example, see: METRIS, 2010).

¹⁰ In the contemporary policy the audit structures have become central to the legitimation of institutions. In the academic scientific domain, “...these new kinds of relationships, habits and practices” (Power, 1997:279) have been created both by the ideology of economic efficiency and by trust in numbers.

that the state (politics) should withdraw slowly from top-down approaches to science.¹¹

It seems that, because of their short time of operation, some of these intermediary structures in CEE countries have not yet overcome many initial deficiencies. In that sense, the so-called “hybridisation” of science and politics, involving the use of new forms to facilitate the coupling of science and politics without the threat that the functional differentiation between science and politics would disappear, is not being adequately realised. Let us take the example of the Slovenian Agency for Scientific Research which was not established before 2003 (for example, see: Kramberger and Mali, 2010). One consequence of the premature stage of the development of intermediary scientific structures in Slovenia is the excessive interference of political parties rotating in power in matters of science. The existing external R&D evaluation system at the Slovenian Agency for Scientific Research is hindered by a lack of appropriate procedures through which the interests of various lobbying groups in and outside of science can be transparently channelled.¹²

Irrespective of differences in the organisation and practical execution of national R&D evaluation systems in CEE countries, there appear to be many common dilemmas directly connected with the increased requirement to make the social sciences more internationally oriented. This especially applies to countries with small communities of social scientists. Let us briefly mention at the end of our discussion three basic dilemmas in the practical use of external R&D evaluation systems in the CEE region:

1. How to find a balance between bibliometrics and peer review?
2. How to ensure the unbiased use of bibliometrics in the social sciences?
3. How to find a balance between support for disciplinary- and interdisciplinary-oriented research groups?

In relation to 1. How to find a balance between the use of peer review and bibliometrics in R&D evaluation procedures?

¹¹ As noted by many policy analysts, in the context of hybridisation of science and politics it has been very important that various types of intermediary structures have been formed. Namely, in a parliamentary democracy intermediary bodies have relative autonomy from the state, which is especially important in the negotiation processes between the interests of different parts of society (Van der Meulen, 2003; Braun, 1997).

¹² Of course, the Slovenian Agency for Scientific Research has in the short time of its existence introduced some positive instruments to ensure the greater transparency of the R&D evaluation system as well. In that sense, the story concerning the use of the R&D evaluation system at the Slovenian Agency for Scientific Research changed more radically after the use of COBISS and SICRIS as centralised and standardised bibliographical databases of research productivity in external R&D evaluation procedures.

The use of quantitative indicators in R&D evaluation procedures has many positive effects if it motivates social scientists to increase their publication productivity at home and abroad. Yet the use of quantitative indicators in R&D evaluation procedures requires a lot of caution. In recent R&D evaluation systems in CEE countries the use of quantitative indicators to measure achievements in science is becoming extremely attractive for the state bureaucracy. Namely, employing quantitative data in R&D evaluation procedures gives the impression of objectivity. The numbers produced by scientometrics appear to be decontextualised and can thus be more easily processed than qualitative judgements by scientists themselves. However, the simplicity and accessibility of quantitative data has two sides because “...making R&D policy decisions on the basis of only bibliometric indicators will certainly lead to many problematic situations” (Noyons and Calero-Medina, 2009:261).

In practice, the strong attention to bibliometrics is to the detriment of qualitative R&D evaluation based on peer-review processes. It is not good for the CEE region because the peer-review system in science before the political turn in 1990 was the most critical element for maintaining the quality of the social sciences. Although problems arise concerning how to achieve unbiased qualitative evaluations, it is clear that R&D evaluation procedures cannot be based solely on the use of quantitative data. Peer review remains the backdrop against which all other types of R&D evaluation appear, and often the standard against which their validity is judged. It is probably not necessary to repeat here that the best way forward is to use a “deliberative” combination of peer review and bibliometrics.

We often encounter very small scientific communities in the CEE region. In this case, it is usually difficult to ensure the necessary conditions to perform objective ex-ante evaluations. Especially in the case of small scientific communities, there is usually a lack of sufficiently qualified scientific personnel to objectively review the contents of research proposals. The solution to avoid these difficulties is to attract peer reviewers from abroad. In many CEE countries that has already been done (METRIS, 2010). But, in itself, this is not enough. Peer reviewers need to be brought in from abroad to fulfil some basic requirements: (1) they must be well equipped with all relevant information concerning the whole context of evaluation in a particular country; (2) their evaluations cannot be limited to just “remote” peer evaluations, which is often the practice; and (3) finally, the typical tensions appearing in the peer-review process such as effectiveness – efficiency, accountability – autonomy, meritocracy – fairness, reliability – validity must be also appropriately resolved. Overemphasising one set in the abovementioned tensions at the expense of the others would have many negative consequences for the objectivity of peer-review processes.

In relation to 2. How to ensure the unbiased use of bibliometrics in the social sciences?

As mentioned, to have blind faith in the craft of bibliometrics in R&D evaluation procedures (impact factors, the number of citations only from ISI-citation bases) is

a big mistake, especially if the differences between various scientific fields are not taken into account. We could say that in this case the scientometrics in R&D evaluation procedures is not used “cum grano salis”, but “sine grano salis”. Without entering into a more extensive discussion of epistemological reasons for differences in the publication behaviour of scientists, let us say that researchers in the social sciences field usually publish much more extensively in books and other types of non-journal publications than their counterparts in the natural sciences. This does mean that publication and citation behaviour is not uniform for all scientific fields. In the social sciences there are fewer preferences for publication in journals and stronger preferences to publish in monographs, proceedings and other edited volumes, while there is also a slower pace of theoretical development in the social sciences, and this could be also reflected in various citation practices. It is estimated that books make up more than half the published references in some (sub) disciplines of the social sciences (Archambault et al., 2006; Hicks, 1999). It seems that in external R&D evaluation systems these differences in publication and citation behaviour of scientific fields are often ignored or at least underestimated.

In the current R&D evaluation system at the Slovenian Agency for Scientific Research we find a very paradoxical situation. On one hand, the publication of books (chapters of books) abroad is ranked relatively low, especially if we compare this with the publication of books (chapters of books) at home. On the other hand, the number of citations from ISI databases used is extremely restrictive, much more than suggested even by experts from Thompson Scientific – ISI.¹³ The existing external R&D evaluation system in Slovenia only takes into account those citations of scientific articles published in scientific journals directly indexed in the ISI Journal Citation Report. Citations which come indirectly into the Thompson Scientific – ISI database (through reference lists at the end of articles indexed in the Journal Citation Report) are not included.

Blind faith in the craft of bibliometrics does not strengthen the confidence of scientists in the validity and reliability of external R&D evaluation systems. This is the main reason the external R&D evaluation procedures is often perceived by social scientists as one extra unnecessary external political and bureaucratic imposition they must deal with.

In relation to 3. How to find a balance between support for disciplinary- and interdisciplinary-oriented research researchers (and research groups) in social sciences?

Today's R&D evaluation systems in CEE countries are still very conservative in that they support more disciplinary-oriented research. The result is that the results of

¹³ The number of “normative SCI-citations” received by scientists in Slovenia is taken as one of the most important criteria that an individual researcher (or research group) should be evaluated positively, and to thereby receive some sort of financial support from the Slovenian Agency for Scientific Research.

social scientists in the inter- or trans-disciplinary research area are still underevaluated. The commitment to traditional disciplinary standards in R&D evaluation procedures inhibits the development of the new research areas that transcend current intellectual and organisational boundaries of scientific disciplines. Scientists are discouraged from investing their intellectual efforts into long-term and highly risky inter- and trans-disciplinary disciplinary research. For these reasons, more effort is thus needed to develop evaluation models to encourage efficient and productive co-operation across fixed disciplinary boundaries.

The inter- and trans-disciplinary kind of research is characterised by problem-orientation instead of academic structures, temporary project- and network-organisations instead of hierarchical organisation and evaluation based on the capability to solve real-world problems instead of traditional academic peer review (Mali, 2010; Kaufmann and Kasztler, 2009). Here, I would like to mention only the case of the new emerging converging sciences: bio-, nano-, cogno- and information sciences. In social sciences, researchers from different disciplinary, theoretical and methodological backgrounds are beginning to co-operate in order to explore all possible social and ethical implications of these new converging sciences.

At the end of this discussion, it is necessary to re-emphasise how important it is in CEE countries to shape the external R&D evaluation systems so that they correctly “capture” the research performance in all fields of science. It is only if they succeed in maximising their values for all scientific fields, that mutual trust of those who evaluate (R&D policy decision-makers) and those who are the subject of evaluations (scientists) will be established.

Conclusion

The growing internationalisation processes are not the only way to achieve higher productivity in the social sciences in CEE countries. Yet, as we have sought to show in the article, these processes are certainly the most important for improving the quality of publication and citation output in the social sciences in this part of Europe. The driving force to be open to publication abroad cannot only be the enthusiasm of individual scientists. Organised institutional support of (national) R&D policy structures is even more important. They have to motivate social scientists via various policy instruments to publish abroad and to establish various types of international scientific networks. Especially external R&D evaluation systems supported by nation states play a very important role here. They have developed a lot of different scientific evaluation instruments to assess individual scientists, research groups and all other entities that request funds to carry out their research programmes and projects. Based on the results of our provisional overview of the situation in CEE countries, we may conclude that they are still far away from offering adequate policy support to ensure that social sciences are more competitive in the international scientific arena. Accordingly, much remains to be done. But whichever direction national R&D policies in this part of the world will take in the

near future, it is imperative that they invest all efforts to achieve a higher level of international productivity and visibility of the social sciences. Figuratively speaking, CEE countries have to run faster in the social sciences not due to any hope of catching up or even overtaking the best Western European countries, but simply to avoid being left far behind.

Bibliography

1. Archambault, E.; Etienne, V.; Cote, G.; Lariviere, V.; and Gingras, Y. (2006). Benchmarking scientific output in the social sciences and humanities. The limits of existing databases. *Scientometrics*, 68 (3):329–342.
2. Biagioli, M. (1999). Aporias of Scientific Authorship. Credit and Responsibility in Contemporary Biomedicine, in: Biagioli, M. (Ed.). *The Science Studies Reader*. New York, London: Routledge.
3. Braun, D. (1997). *Die politische Steuerung der Wissenschaft*. Frankfurt-New York: Campus Verlag.
4. Braun-Munzinger, P. (2009). Das Publikationsverhalten in Grosskollaborationen, in: Stefan Hornbostel et al. (Ed.). *Publikationsverhalten in unterschiedlichen wissenschaftlichen Disziplinen. Beitrage zur Beurteilung von Forschungsleistungen*. Band 12, Berlin: Alexander von Humboldt Verlag.
5. Crane, D. (1972). *Invisible colleges: Diffusion of knowledge in scientific communities*. Chicago: University of Chicago Press.
6. Cronin, B. (2001). Hyperauthorship. A Postmodern Perversion or Evidence of a Structural Shift in Scholarly Communication Practices. *Journal of the American Society for Information Science and Technology*, 52 (7):558-569.
7. Dyker, D. A. and Perrin J. (1997). Technology policy and industrial objectives in the context of economic transition, in: Dyker, D. A. (Ed.). *The Technology of Transition – Science and Technology Policies for Transition Countries*. Budapest: Central European University Press.
8. EU Science, Technology and Competitiveness Key Figures Report (2009). *A more research intensive and integrated European Research Area*. Brussellss: European Commission. Read on 30. December 2010. (<http://ec.europa.eu/research/era/pdf/key-figures-report2008-2009>).
9. Felt U. (Ed.) (2009). *Knowing and Living in Academic Research. Convergence and heterogeneity i research cultures in the European context*. Prague: Institute of Sociology of the Academy of Science of the Czech Republic.
10. Frankel, S. M. and Cave, J. (1997). Introduction, in: Frankel, S. and Cave, J. (Eds.). *Evaluating Science and Scientists. An East-West Dialogue on Research Evaluation in Post-Communist Europe*. Budapest: Central European University Press.
11. GESIS (2010). *Knowledge Base. Social Science Eastren Europe*. Leibnitz Institute for Social Sciences. Read on 29. December 2010. (<http://www.cee-socialscience.net/journals>).
12. Gossart, C. and Ozmean, M. (2009). Co-authorship networks in social sciences. *Scientometrics*, 78 (2):323-345.
13. Hemlin, S. (1996). Research on research evaluation. *Social Epistemology*, 10 (2):209-250.

14. Hicks, D. (2004). The Four Literatures of Social Sciences, in: Moed, H. F.; Glaenzel, W. and Schmoch, U. (Eds.). *Handbook of Quantitative Science and Technology Research. The Use of Publication and Patent Statistics in Studies of S&T Systems*. Dordrecht, Boston, London: Kluwer Academic Publishers.
15. Hicks, D. (1999). The difficulty in achieving full coverage of international social science literature and the bibliometric consequences. *Scientometrics*, 44 (2):193-215.
16. Hoekman, J.; Koen, F. and Tijssen, R. J. W. (2010). Research collaboration at a distance: changing spatial patterns of scientific collaboration within Europe. *Research Policy*, 39 (5):662-673.
17. Holm, P.; Guilhot, N.; Dumitrescu, D.; Griffin, G.; Jarrick, A.; Rév, I.; Roll, G.; Smilov, D.; Sztompka, P.; Thys-Clement, F.; Tsakoglou, P.; Langenhove, L. and Wolf, G. (2009). *Emerging Trends in Socio-economic Sciences and Humanities in Europe. The Metrics Report*. Luxembourg: Office for Official Publications of the European Communities.
18. Hornbostel, S. (1997). *Bewertungen in der Wissenschaft*. Opladen: Westdeutscher Verlag GmbH.
19. Kaufmann, A. and Kasztler, A. (2009). Differences in publication and dissemination practices between disciplinary and transdisciplinary science and the consequences for research evaluation. *Science and Public Policy*, 215-227.
20. Koen, F.; Hoekman, J.; Kok, S.; Pons, R.; Van Oort, F. and VanVliet, J. (2009). Deat of Distance in Science? A Gravity Approach to Research Collaboration, in: Pyka, A. and Scharnhorst, A. (Eds.). *Innovation Networks. New Approach in Modelling and Analzing*. Dordrecht, Heidelberg, London, New York: Springer Verlag.
21. Kovacs, I. and Taras, D. (2010). Conclusion. Internationalisation of Central and Eastern European social sciences – is the catching up a myth or reality?, in: Kovacs, I. and Taras, D. (Eds.). *Internationalisation of Social Sciences in Central and Eastern Europe. The catching up – a myth or a strategy?*. London and New York: Routledge.
22. Kramberger, A. and Mali, F. (2010). An evaluation system of the science and international orientation of social scientists: The case of Slovenia, in: Kovacs, I. and Taras, D. (Eds.). *Internationalisation of Social Sciences in Central and Eastern Europe. The catching up – a myth or a strategy?*. London and New York: Routledge.
23. Lambiotte, R. and Panzarasa, P. (2009). Communities, knowledge creation, and information diffusion. *Journal of informetrics*, 3 (3):180-190.
24. Lee, S and Bozeman, B. (2005). The impact of research collaboration on scientific productivity. *Social Studies of Science*, 35 (5):673-702.
25. Lukkonen, T.; Persson, O. and Siversten, G. (1992). Understanding Patterns of International Scientific Collaboration. *Science, Technology & Human Values*, 17 (1):101-126.
26. Mali, F. (2003). Sociology in Slovenia. The challenge of transition, in: Keen, M. F. and Mucha, J. (Eds.). *Sociology in Central and Eastern Europe: transformation at the dawn of a new millenium*. Westport, Conn.: Praeger.
27. Mali, F.; Kronegger, L. and Ferligoj, A. (2010). Co-authorship trends and collaboration patterns in the Slovenian sociological community. *Corvinus journal of sociology and social policy*, 1 (2):29-50.
28. Mali, F. (2010). Turning Science Transdisciplinarity: Is it Possible for the New Concept of Cross-Disciplinary Cooperations to Enter Slovenian Science and Policy, in: Mueller K. H. et al. (Eds.). *Modern RISC-Societies. Towards a New Paradigm for Societal Evolution*. Wien: Echoraum.
29. Mark S. F. and Cave, J. (1997). *Evaluating Science and Scientists. An East-West Dialogue on Research Evaluation in Post-Communist Europe*. Budapest: Central European University Press.
30. Mattsson, P.; Laget, P.; Nilsson, A. and Sundberg C. J. (2008). Intra-EU vs. extra-EU scientific co-publication patterns in EU. *Scientometrics*, 75 (3):555-574.

31. METRIS (2010): *Monitoring European Trends in Social Sciences and Humanities*. European Commission. DG-Research. Read on 14. December 2010. (<http://www.metrisnet.eu/metris>)
32. Mirskaya, E. (1998). From East To West. New Patterns of International Relations of Research, in: Maynetz, R.; Schimank, U. and Weingart, P. (Eds.). *East European Academies in Transition*. Dordrecht, Boston, London: Kluwer Academic Publishers.
33. Mucha, J. and Forrest, K. (2003). Central and Eastern Europe and Its Sociology at the Beginning of the Post-Communist Era, in: Keen, M. F. and Mucha, J. (Eds.). *Sociology in Central and Eastern Europe : transformation at the dawn of a new millenium*. Westport, Conn.: Praeger.
34. Must, U. (2006). "New" countries in Europe – Research, development and innovation strategies vs bibliometric data. *Scientometrics*, 66 (2):241-248.
35. Noyonsed, M. and Calero-Medina, C. (2009). Applying bibliometric mapping in a high level science policy context. *Scientometrics*, 79 (2):261–275.
36. Power, M. (1997). *The Audit Society Rituals of Verification*. Oxford: Oxford University Press.
37. Price, D. S. (1963). *Little Science, Big Science and Beyond*. Columbia University Press: New York.
38. Prpić, K. (2007). Changes of scientific knowledge production and research productivity in a transitional society. *Scientometrics*, 72 (3):487–511.
39. Sambunjak, D.; Ivanis, A.; Marusic, A. and Marusic, M. (2008). Representation of journals from five neighboring European countries in the Journal Citation Reports. *Scientometrics*, 76 (2):261–271.
40. SCImago (2010). *SCImago Journal & Country Rank*. Read on 28. December 2010. (<http://www.scimagojr.com>)
41. Schiermeier, Q. (2008). Westernizing Eastern-bloc science. *Nature Biotechnology*, 26 (8):949-950.
42. Van der Meulen, B. (2003). New roles and strategies of a research council. Intermediation of the principal-agent relationship. *Science and Public Policy*, 30 (5):323–336.
43. Wagner, C. and Leydesdorff, L. (2005). Network structure, self-organization, and the growth of international collaboration in science. *Research Policy*. 34 (10):1608-1618.
44. Wagner, C. (2005). Six case studies of international collaboration in science. *Scientometrics*, 62 (1):3-26.
45. Whitley, R. (2007). Changing Governance of The Public Science, in: Glaeser, J. and Whitley, R. (Eds.). *The Changing Governance of the Science*. Dordrecht, Heidelberg, London, New York: Springer.
46. Wuchty, S.; Benjamin, J. and Brian, J. (2007). The increasing dominance of teams in production of knowledge. *Science*, 316 (5827):1036-1039.
47. Ziman, J. (1994). *Prometheus Bound. Science in a dynamic steady state*. Cambridge: Cambridge University Press.

Franc Mali

Univerza v Ljubljani

Fakulteta za družbene vede

franc.mali@fdv.uni-lj.si

Problemi javnih politika prema međunarodnoj produktivnosti i vidljivosti društvenih znanosti u zemljama Srednje i Istočne Evrope

Sažetak

Rad se bavi problematikom međunarodne produktivnosti i vidljivosti društvenih znanosti u zemljama Srednje i Istočne Evrope (SIE). Razlozi zbog kojih društvene znanosti u SIE državama zaostaju u internacionalizaciji proizlaze ne samo iz prošlosti, već i iz sadašnjosti. Intelektualni potencijal društvenih znanosti često nije sasvim priznat niti efektivno korišten od različitih grupa društvenih aktera. Postoji također i nedostatak institucionalne potpore od nositelja I&R politika u poticanju društvenih znanstvenika na više objavljivanja u inozemstvu i na uspostavljanje mreža izvrsnosti izvan nacionalnih granica. U radu je glavni fokus na nacionalnim I&R evaluacijskim sistemima. I&R evaluacijski sustavi imaju ključnu ulogu u alokaciji finansijskih potpora znanstvenicima, potpomaganju individualnih znanstveničkih karijera, osiguranju disciplinarnih (ili interdisciplinarnih) standarda itd. Naposljetku, nemoguće je razumjeti sadašnju razinu internacionalne produktivnosti i vidljivosti društvenih znanosti u SIE državama bez objašnjavanja kako nacionalni I&R evaluacijski sistemi funkcioniraju. Korišteni su neki analitički podaci kako bi se ilustriralo međunarodnu orijentaciju društvoznastvenika. Ovi podaci upozoravaju da se velika očekivanja kako će društvoslovci iz ovog dijela Evrope lako prodrijeti u kanale objavljivanja na Zapadu i imati veliki znanstveni odjek tek trebaju realizirati.

Ključne riječi: društvene znanosti, međunarodna produktivnost i vidljivost, I&R evaluacijski sustavi, bibliometrija, znanstveno vrednovanje, koautorstvo, publikacije.

Primljeno: prosinac 2010.

Prihvaćeno: ožujak 2011.