



Assessing the Environment for Social Science Research in Developing Countries: The Case of South Africa

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CONTENTS

Summary	3
Introduction and Context	4
Brief Literature Review	5
Methodology	8
Findings	8
Conclusions	21
Recommendations	23
References	25

SUMMARY

South Africa has a rich landscape of social science research institutions, and an equally varied tradition of social science research. These institutions are either located within discrete units or centres at the country's universities, or they stand alone as governmental or parastatal agencies, non-governmental organisations (NGOs), or collaborative arrangements such as research networks between different local, regional, and international actors, including actors in African low-income countries and other regional developing countries. The evolution of a critical social sciences research tradition in South Africa parallels the struggle against colonial and apartheid rule, where data and research helped to lay the foundation for key post-apartheid institutions. A significant contribution of social science knowledge generation enterprise in the post-apartheid period is its contribution to national policy making. In this context, the intention of this study was to map the social science research environment in South Africa, to conduct a political economy analysis thereof, and to develop a framework for measuring the outputs, outcomes, and impact of this environment to development. The study adopted a mixed methods design, incorporating both qualitative (specifically key informant interviews) and quantitative (specifically a survey targeted at social scientists in South Africa and a bibliometric analysis) research approaches. The findings indicated that research productivity among social scientists is increasing with growing funding for research as well as investments in building research capacity. However, the senior and established social scientists were of the opinion that social sciences is methodologically and conceptually/ theoretically stunted and has not developed appropriate approaches to engage current societal challenges. Furthermore, numerous challenges remain which included limited funding opportunities (more prominent for certain disciplines and thematic areas), biases in the perceived value of research and contributions (including those in relation to performance management and promotions) towards the natural and physical sciences as well as specific thematic areas, workload distribution (especially at universities), and support for social scientists in terms of mentoring and networking. It is important to note that in the South African context, the availability of funding is not the main issue, rather the ability of social scientists to access funding is. The key recommendations emerging from this study were the need to develop, reward and retain social scientists (and the need to review systems where appropriate) and increase funding opportunities.

INTRODUCTION AND CONTEXT

South Africa has a rich landscape of social science research institutions, and an equally varied tradition of social science research. These institutions are either nested within discrete units or centres at the country's universities, or they stand alone as governmental or parastatal agencies, non-governmental organisations (NGOs), or bespoke collaborative arrangements such as research networks among different local, regional and international actors, including actors in African low-income countries and other regional developing countries. The evolution of a critical social sciences research tradition in South Africa parallels the struggle against colonial and apartheid rule, where data and research helped to lay the foundation for key post-apartheid institutions. There has also been some contribution of social science knowledge generation activity in the post-apartheid period to national and institutional policy making.

The Global Development Network (GDN) has developed its *Doing Research* programme to develop and improve its understanding of the social science research environment in developing countries and in so doing to catalyse new thinking about how to measure research productivity using innovative, non-traditional and, importantly, a context-specific approach. Three academics from the University of KwaZulu-Natal completed this research to support GDN in the achievement of its objectives, and at the same time, achieve new data and analysis which would assist the development agenda of South Africa and Africa.

This research adopted a mixed methods design, incorporating both qualitative and quantitative research approaches, to map the social science research environment in South Africa, to conduct a political economy analysis thereof, and to develop a framework for measuring outputs, outcomes, and impacts of this environment to development. Adopting a political economy framework ensures a critical stance, a stance that examines notions such as power dynamics (including how key decisions that influence how the social sciences are conceptualised and recognised as well as how appropriate resources are allocated), contestation and contradiction, socio-economic relevance, and how key focus areas are prioritised to the exclusion of others. The overarching research question of this study was: How can we think differently about the evaluation of the contribution of the social sciences to South African research productivity, policy and social development, beyond the conventional quantitative discourses of research performance measurement? The overarching objectives linked to GDN were meant to:

- Contribute to the understanding of the social science research environment in developing countries;
- Help catalyse new thinking about how to measure research productivity;
- Generate new data and analysis for those interested South African, African and other regional stakeholders; and
- Develop a framework of indicators for assessing the inter-relations between the research environment and research productivity, quality and social utility (or uptake) in South Africa.

The rationale of this study can therefore be thought of as twofold: in the first instance, it builds on, extends and complements research undertaken by Centre for Research on Evaluation, Science and Technology (CREST, 2014) that also investigates both qualitatively and quantitatively the support for and impact of social sciences research in South Africa. The research therefore provided:

- policy-relevant information on the institutional context (both government and academic) in which research is undertaken;
- the individual conditions and exigencies under which this research takes place;

- funding streams which influence the types of research being undertaken;
- the main actors in the research-policy nexus; and
- the nature of the external environment for social science research production in South Africa.

BRIEF LITERATURE REVIEW

Vale's (2009: 247) interview with Edward L. Ayers, a distinguished social scientist, revealed that increasingly the sciences and the humanities are viewed as being complementary with Ayers claiming that "the humanities and modern technological society have always been co-dependent". What the interview indicates is that much emphasis is placed on the value of social sciences and humanities to the sciences, justifying the role of social sciences in academic training and research.

The history of the evolution of social sciences in South Africa for the past 80 years is traced by CREST (2014), which asserts that social sciences research has a strong tradition in the country. This tradition is reflected by the establishment of the Human Sciences Research Council (HSRC) in 1969. The current position of the humanities and the social sciences in the country is a topical issue for rigorous debate. In terms of the volume of the research produced in these branches of knowledge, it is both comparable and significant. The potential for the human and social sciences to influence transformation in South Africa has been acknowledged (Wilson et al., 1999). The humanities and the social sciences constitute 38% of the annual total research output in the country (Academy of Science of South Africa - ASSAf, 2011).

The Ministerial Review (Department of Science and Technology - DST, 2012: 197-8), summarises the following statistics taken from the 2008-09 National Research and Development (R&D) Survey for South Africa:

- As a percentage of the whole, government spending on social sciences R&D at local, provincial and national levels was 18.5%.
- Expenditure by higher education institutions on social sciences R&D was 20%.
- Including the not-for-profit, and business sectors, overall more than 87% of research expenditure was allocated to natural sciences, engineering and technology fields, while only 12.5% was allocated to the social sciences.

These figures confirm the emphasis placed on the natural sciences and engineering in the allocation of research funding resources. Thus, social science researchers and institutions depend on international donors for much of their research funding. The government spend on the social sciences is relatively low compared to the science and technology fields.

Social science research institutions are either nested within discrete units or centres in the country's universities or they stand alone as governmental agencies, non-governmental organisations, or bespoke collaborative arrangements between different local, regional and international actors. The HSRC, one of the eight science councils in South Africa, also has a number of active engagements across the continent. It is important to note that South Africa is one of the few African countries that have a government-funded research institute devoted to the social sciences.

The evolution of a critical social sciences research tradition in South Africa - one that takes as axiomatic understandings of racial, gender, and other forms of social exclusion - arguably parallels the struggle against colonial and apartheid rule, where data and research helped to lay the

foundation for key post-apartheid institutions such as the Constitution (Mouton, 2010). We contend that social science expertise continues to play a vital and instrumental role in both the formulation and critique of policy.

The South African context is unique globally in that the government allocates substantial subsidies to universities based on research productivity in selected categories. This is one of the main income streams at state-funded universities. In terms of the Department of Higher Education and Training (DHET, 2015a; 2015b), the categories that receive subsidies are journal articles in accredited lists that are provided annually by the DHET, as well as books, chapters in books and conference proceedings that are screened and accepted by the DHET. Additionally, the DHET allocates subsidies in relation to Masters and Doctoral students graduated. Subsidies are allocated per research output category in relation to Author Units (AUs). It is important to also note that in the South African system, co-authorship is shared by the different institutions proportionally (for example, if two academics from different institutions publish an article, each institution is allocated 0.5 AUs) and authors not affiliated to recognised institutions (currently the 25 state-funded universities, including the universities of technology, as well as the main research institutions including the HSRC, the Medical Research Council - MRC and the Council for Scientific and Industrial Research – CSIR are recognised) are not subsidised. All staff affiliated to the recognised institutions and students who publish qualify for subsidies.

South Africa has a highly regulated public sector higher education environment as described above. What is important to note is that 20 years after the demise of apartheid, the top universities in terms of research productivity are the historically advantaged white universities, with a few exceptions.

To begin, one needs to look at the state of humanities and the social sciences in South Africa. There have been two major reports (ASSAf, 2011; DHET, 2011) that emerged out of the longstanding debate on the declining status and position of humanities and the social sciences in South Africa. Both reports affirmed that there is a crisis or decline in the humanities and social science subjects in the country. The crisis is believed to be unfolding in different directions: decreasing student enrolments in these subjects, the production of graduates in the fields, the drying up of funding resources, intellectual stagnation, the visibility (or lack) of research outcomes, and the ageing academic and research workforce (ASSAf, 2011).

Despite these significant challenges there are a number of initiatives to reinvigorate the social sciences in South Africa. One of the reports, entitled *The Humanities Charter*, resulted from the initiative of the Minister of Higher Education (DHET, 2011). The architects of this report put forward several concrete suggestions for rescuing the humanities and social sciences from the ongoing slide.

Similarities with these suggestions and recommendations can also be seen in the ASSAf (2011) study. ASSAf proposed a Council for the Humanities to advise the government to improve the standing of the humanities in the country. Mouton (2011) asked a few relevant questions with regard to the present crisis or decline of humanities in South Africa. Mouton's questions were about the convincing case for the dire state of the humanities in South Africa, the nature of the evidence provided to show the disadvantaged position of the humanities, and whether the recommendations put forward for the recovery of humanities were either evidence-based or indeed realistic.

The social sciences are generic and have a number of component subjects. Robbe (2014), for instance, in her essay on the issues of African studies deliberated on the possible conditions for the emergence of African studies in South Africa. One recommendation by Robbe (2014) for the growth and development of the humanities and social sciences in South Africa is the need for research on

aspects of South African society and culture to provide substantial theoretical insights. Sitas (1997) suggested that a new sense of trans-disciplinarity in new contexts outside sociology, and a search for theoretical, practical and transformative innovation, can turn the situation around. Vale and Fourie's (2014) work provides a comprehensive and useful account of the evolution of politics, and political science as a discipline, as a field of study at South African universities.

While reviewing the position of the political sciences, Gouws et al. (2014) noted several changes that have occurred in the field of political sciences. These contributed towards the disciplinary growth and development of political sciences in the country. The study by Fairhurst et al. (2003) presented some key issues pertaining to geography as a discipline in South African universities. Some of the findings of this study that pertained to research revealed the current position of the discipline in the South African context. In the light of the environmental challenges that South Africa is facing, Shackleton et al. (2010) envisaged research programmes which could produce the necessary knowledge and skills, engaging scientists in the field to find meaningful solutions to a number of relevant issues.

The challenge for South African sociology is to establish a more professional sociology that makes use of the rich theoretical and methodological traditions of the core of the discipline (Webster, 2004). In a historical review of the discipline of sociology in South Africa, Jubber (2007) found that South African sociology's published work had contributed significantly to the knowledge about the nature, structure and history of the complexities of South African society. In a similar way, Mapadimeng (2009) maintained that in the complex post-apartheid society there were opportunities in the development of different but complementary streams of sociology in the country. In a bibliometric analysis Sooryamoorthy (2015) reported that the current sociological research being conducted in South Africa was relevant in a society that was grappling with a host of social issues, could help meet the challenges the society were facing and, in the end, lead to the recognition of the discipline in the country.

Deacon et al. (2010) argued that education research was robust with numerous scholars working in the area. But most of the research was more individualistic and on a small-scale, rather than large-scale and long-term. Macleod and Howell (2013) noted that there had been an increase in the production of papers in psychology, a change in the methodological persuasions in favour of increases in the number of theoretical and qualitative papers, the geographical specificity of research, and declining collaborative efforts with African, Asian, South American, and Middle-Eastern scholars. As for theology, De Villiers (2004) showed that the position of the social sciences was not different from that of theology during the apartheid period. Criminology in South Africa, over the years, evolved from conventional criminology to practical criminology (Hesselink, 2013). Scholars like Artz and Moult (2012, cited in Hesselink, 2013: 139) viewed criminology as being at a crossroads.

CREST (2014) presented some key findings in regard to the current position as well as the strengths and the weaknesses of the social sciences in the country. CREST (2014) revealed that in terms of research outputs South Africa is growing. There has been a six-fold increase in the research capacity of the social science research in the country during 1993-2012. Two areas were identified with the highest growth rate in the production of research outputs.

Between 2007 and 2011 South Africa's researchers were the 18th highest producer of publications in the social sciences discipline globally (International Social Science Council/ United Nations Educational, Scientific and Cultural Organisation - ISSC/ UNESCO, 2013). Yet the social sciences in South Africa face deep and significant endogenous and exogenous challenges. Donor dependence is

one result. There is also the much broader challenge of building the next generation of South African social science academics, which under the current incentive structure afforded to universities and public research institutions, remains difficult.

METHODOLOGY

This study was conceptualised within the context of a political economy approach which in itself is multi-dimensional and multi-disciplinary, the context which many social science disciplines function and undertake research in. Adopting the political economy also permits a critical examination of social sciences in South Africa (and Africa more generally). This research adopted a mixed methods approach, which included key informant interviews, surveys and bibliometric analysis.

The participants were selected for the in-depth face-to-face key informant interviews based on their positions in universities. Efforts were made to ensure that the following constituencies were represented (the number of persons interviewed in each category is indicated in brackets):

- Universities (13 - 4 were also members of research councils/ commissions, 2 were also research consultants and 3 were also public intellectuals);
- Research councils/ institutes/ centres (8 - one was also a public intellectual and another was also a consultant);
- Government (4 - one was also the previous CEO for the Council for Higher Education);
- Research consultancies (4 - 2 were also based at universities and one was also affiliated to a research council); and
- Social media commentators/ public intellectuals (3 - 2 of whom were based at universities and one at a research council).

In total, 24 in-depth interviews were completed. Participants were chosen purposively. Some participants belonged to more than one category as indicated above.

A structured questionnaire was used to collect primarily quantitative data using closed-ended and Likert type questions. Social scientists who work in higher education institutions, research institutes, government departments, civil society organisations and NGOs were approached to participate using the purposive sampling approach. The expected sample size was 100-120 respondents. One hundred and seven (107) completed surveys were analysed. A bibliometric analysis of publications produced by South African authors during the period of 1966 to 2014 was undertaken. This was accessed from the Web of Science database.

FINDINGS

This section of the report presents an analysis of the publications of South African authors who have worked in various subjects/ branches of the social sciences. The data used in the analysis was from the Social Sciences Citation Index (SSCI) dataset of the Web of Science. Some general features of these publications by South African social scientists can be inferred from this data for the entire period. The highest number of papers during the period of analysis was produced in 2014 (2,576), which formed about 11% of the total production. The number of publications reached a four-digit figure from 2008 onwards. Ninety-eight percent of the papers (23,425) were published in English while the remaining were written in Afrikaans, Dutch, German and French. The papers originated mainly from universities. The first few top institutions with the highest number of publications were

the University of Cape Town (4,475 papers, 18.78%), the University of Witwatersrand (4,412 papers, 18.51%), the University of Stellenbosch (2,304 papers, 9.67%), the University of Pretoria (1,994 papers, 8.37%), the University of KwaZulu-Natal (1,618 papers, 6.79%), the University of South Africa (UNISA) (1,074 papers, 4.5%) and the University of Western Cape (999 papers, 4.2%).

The major subject/ research areas under which the publications fell were psychology (2,772 papers, 15.83%), business economics (3,106 papers, 13%), public environmental and occupational health (2,204 papers, 9.2%), education and educational research (2,164 papers, 9.1%), area studies (1,360 papers, 5.7%), social sciences (other topics) (1,182 papers, 4.96%), anthropology (1,156 papers, 4.85%), and environmental sciences and ecology (1,079 papers, 4.5%). The outlets chosen by the authors for their publications ranged from national to international journals.

To take the analysis to the next level more details of the publication records were sought. For this purpose full bibliographic information of the publications was gathered from the database. As it is not easy to analyse all 23,881 publications produced during 1966-2014, a sample of publications was selected for in-depth analysis. Given the number of publications for the years from 1966 to 2014, we started with the year 1970 when the publications were stabilised. In the next stage, publications in every five years were chosen. This means that all publications for the years of 1970, 1975, 1980, 1985, 1990, 1995, 2000, 2005 and 2010 formed the data for more detailed analysis. There were a total of 3,794 publications for these selected nine years, which is about 16% of all the publications produced by South African scholars from 1966 to 2014.

In line with the objectives of the project, this analysis focussed on the following:

- The production of publications in the field of the social sciences in South Africa;
- The trends of publication productivity across years and subjects;
- Characteristic features of these publications in terms of authorship/ co-authorship and subject/ research areas;
- Partnership of South African scholars with authors from other parts of the world, for the production of publications; and
- The origin of publications in terms of the sector of authors.

As noted earlier, there were a total of 3,794 papers published by South African authors in the nine sampled years. In 1970, there were 47 publications forming 1.2% of the total publications for all the sampled years. The production of papers in the social sciences that were stored in the Web of Science database steadily increased over the years. By 2010 the production of papers reached a figure of 1,694 papers, which is 45% of all the papers. In this production two trends are evident. One, between 1990 and 1995 the percentage of papers increased significantly from 233 to 349 papers. This was an increase of over 3%. Two, between 2000 and 2005 the increase was one of the highest, from 579 to 1,694 publications (an increase of 30%). Two years (1995 and 2010) were thus characterised by significant increases in production.

The papers were produced by either single or multiple authors. Most of the papers (60%) were produced jointly, while the remainder (40%) were sole-authored publications of South African scholars. Since 1970 South Africans preferred to work in teams, which was evident in the steadily increasing production of joint publications. In 1970 there were only a quarter of the publications that involved more than one author. By 1985 it had risen to 48%, which is close to half of all the papers. This means one in every two papers was co-authored. By 2005 this ratio improved to three out of four papers. In 2010, joint publications formed 68% of the total publications for the year.

The increase in the number of authors per publication showed the greatest increase after 1995. South African social science scholars have become more and more collaborative in the production of

publications in a significant way since then. As is evident from the data, the trend is one of collaboration rather than of single authored publications.

The collaborative element in the production of publications leads to the next level of analysis of the type and nature of collaboration. There are many types of collaboration, country of authors (South Africans or others), domestic collaboration, internal institutional collaboration, external institutional collaboration and international collaboration.

Sixty percent of the papers were collaboratively produced by South African authors during the sampled period of analysis. As noted earlier, for multiple authors the trend was one of growth, from 26% in 1970 to 68% in 2010. The association of papers with any type of collaboration was significant in the Chi-square test ($p<.00$).

In the data, 40% of the publications brought together scholars from within the same or different organisations within the country. Of these 28% were internal institutional and 11% external institutional collaboration in the papers. In domestic collaboration the change followed an upward path until 1995, from 17 to 42%. Since then (from 2000) there has been a decline in domestic collaboration. The same pattern was also observed in internal institutional collaboration. Again, this could be attributed to co-publishing with students as discussed earlier. In external institutional collaboration, it started with a lower percentage of publications than the internal one, which showed an increase from 2.1% in 1970 to 13% in 2010. South African scholars are more inclined to associate with their colleagues in the same institution than with those in other institutions in the country. With regard to international collaboration, there were a quarter of publications (26%), which is close to the number of domestically collaborated papers. Up until 1985 international collaboration among South African scholars was in the region of 8%. Thereafter there was a steady growth in the participation of scholars with the international community. In 1990 the percentage was 10, which increased to 35% by 2010.

The Web of Science classifies publications under a range of subjects. There were more than 200 subject/ research areas. As the focus of this analysis was on publications in the social sciences, the subjects were filtered accordingly. These were psychology (which includes the behavioural sciences, psychiatry and substance abuse), economics (including business), sociology (including ethnic studies, social issues, science and technology studies, criminology, family studies and cultural studies), education and education research, area studies, anthropology, geography (including urban studies), linguistics, information studies and library sciences, international relations and public administration, and social work.

Psychology emerged as the top subject/ research area with the highest number of publications (19%). In the order of number of publications, psychology was followed by economics, sociology, education, area studies, international relations and public administration, anthropology, geography, linguistics, information studies and library sciences, and social work.

This bibliometric analysis provides an insight into the nature of the production of papers by South African scholars who work in the area of social sciences. The number of authors involved, specific subject/ research areas and collaboration were significant variables in mapping the growth of the social sciences in South Africa.

The analysis of the qualitative and quantitative data is given below. Very few respondents stated that they received any other formal training in research methodology (12%), policy engagement (one respondent) or research communication. Training included general methodology training, pre-doctoral training programmes and training in social science statistical packages. The pre-doctoral training seemed to be specifically linked to proposal writing seminars or programmes. None of the

respondents received research communication training. This aspect is critically important since a key concern emerging in the literature is the ability of social scientists to communicate their research to other users and stakeholder groups outside academia. There were either limited opportunities for this type of training or social scientists did not see the value of this type of training which may be linked to their focus on academic publications. The training received were linked to qualitative and quantitative data collection approaches (related to specific projects) and how to undertake a policy review. None of the respondents indicated that the training resulted in the respondent receiving a degree outside university courses.

The data showed that 89% of the respondents were not NRF-rated scientists, which suggests that although research outputs in the social sciences were increasing, this was a result of a few social scientists being productive which positions them to be rated. Among the rest, the most prominent was a C (1, 2 and 3) rating (10.3%). One respondent each stated B2 and Y. Most of the rated researchers received their ratings in the last decade (6.5% during 2005-2011). This is not surprising given that rating for social scientists were introduced after it was institutionalised for the natural scientists. In addition, the increase in rating could be linked to the fact that in the recent decade and a half there has been a rise in research outputs by social scientists.

As for the age of the respondents, most of the respondents were in the class of 26-35 years (40%), followed by 36-45 years (22%) and 46-55 years (22%). A few respondents were 56-65 years (13%) and more than 65 years (3%). The average age was calculated to be 41.5 years and ranged from 21 to 70 years.

Almost equal proportions of respondents were available for males (46.7%) and females (53.3%). This does not reflect the female gender bias in the social sciences noted in the literature. In terms of the historical racial category of the respondents self-identified themselves as White (36%), African (25%), Indian (22%) and Coloured (10%). A few (5%) stated not applicable or other but did not indicate a racial category. The results did not reflect the population distribution in South Africa and indicated the historical biases that persist in academia and within research institutions.

Prominent disciplines of the respondents included sociology (21%), geography (13%), education (11%), political science (9%), psychology (9%), social work (8%), history (8%), development studies (7%) and economics (6%). In the case of geography, these respondents were human/ social geographers. The disciplines traditionally regarded as social sciences were prominent (for example, sociology, political science, psychology and education). It is interesting to note that there were respondents (one each) from a public administration and law disciplinary background.

The majority of the respondents (97%) forwarded various definitions of what constitutes the social sciences. The most prominent thematically categorised responses were the focus on people and society (30%), systematic/ scientific study of social processes and humans (25%), using appropriate social quantitative and/or qualitative methodologies to conduct research on society and societal problems (24%), understanding of social processes, interactions, structures, institutions and consequences (20%), social inquiry or investigation that employs scientific methods towards finding answers to social questions (9%), study of people and corresponding institutions, specifically key aspects such as perceptions, beliefs, behaviours and attitudes (8%), and the examination of how people interact with one another and their environment (7%). It is interesting to note that there was a focus on content (the 'what' component) as well as the 'how' aspects (the focus on research and methodologies in particular).

The most prominent social science research areas/ fields in South Africa were identified as education (88%), health issues (71%), urban studies (59%), environmental issues (58%), development

studies (51%), rural development (48%), economic issues (46%) and transformation and equity issues (45.8%). Close to a third of the respondents also stated globalisation and global change (32%) and information science and technology studies (31%). These areas are aligned to key challenges within the South African context. What is also noteworthy is that inter-disciplinary fields such as environmental and health issues were prominent. During the key informant interviews it was raised by several of the informants that many of the research areas/ fields such as development studies, rural development, urban studies, globalisation and global change, environmental issues and health issues were cross-cutting and overlapping. Examples provided were that global change can include environmental issues and rural development can include economic, environmental and health aspects. Development studies in particular was seen as a research area that can be all encompassing.

The majority of the participants of the qualitative study did not directly provide a definition or a list of disciplines in terms of responding to the question pertaining to what constitutes the social sciences in South Africa. A dominant way of answering the question, which emerged amongst the younger and black/ women participants' was that social sciences research would be research that: "assists with the challenges of a developmental state" or research that "contributes to the transformation of higher education taking people as the most important factor". However, they identified themselves as social scientists as they have the skills and training to deliver on the above mandate.

Older and more established participants tended to give a history of the development of social sciences globally and in South Africa, and then defined the disciplines, and often it correlated with what we would define as the mainstream of classical/ traditional understanding of the social sciences. A trend which emerged was that the academics who were trained in a particular discipline (for example, psychology) but were working and publishing in newer disciplines, such as gender studies/ masculinity studies, felt that a question as to what constituted social science research was not that relevant as the issue was what was the impact of the research which one undertook. They, however, emphasised that they did not believe that business and management sciences were core or part of the social sciences. There seems to be emerging discourse that 'business', 'human geography' (where there is a tendency to embrace the identity of being an environmental scientist), 'psychology' and 'education' are not part of social sciences. This alludes to the power dynamics in academia. These disciplines are well positioned to respond to funding opportunities and inter-disciplinary research. Key informants, who were psychologists and human geographers, spoke to the fact that many of their colleagues would rather identify as health specialists and environmental scientists, respectively, and not social scientists as health and environmental specialists/ scientists were "ranked higher" by funders and also in terms of fields that government identifies as scarce skills or priority areas. One key informant noted that these perceptions and attitudes were also noticeable in universities and among funders.

A number of persons when engaged with or late in the conversation after initially not being sure about what constitutes the social sciences tended to define it in relation to their own discipline or disciplines that they would see as 'close' to them, for example, sociology, political sciences, development studies and interestingly newer areas such as tourism studies and international relations. Confusion and the tendency to define social sciences in relation to one's own discipline focus were clearly evident and resonated with the survey findings as well. The lack of clarity has led a number of consequences as discussed above and highlighted as follows: levels of contribution and the extent to which different types of research are valued and acknowledged, allocation and attempt at securing resources, leadership concerns, methodological clarity and development,

curricula not being transformed and essentially not having “anything to say or very little to contribute” to current challenges in South Africa. This, some of the participants argued, is leading ultimately to the social sciences being marginalised.

Some of the participants engaged with the power dynamics linked to the definition of social sciences, noting that as long as social sciences are seen as a “step-child” to the natural and physical sciences, disciplines and social scientists who can will embrace what they perceive to be more marketable and reputable identities such as geographers preferring to be regarded as environmental scientists. Many researchers did not identify themselves with their disciplinary roots but the thematic field/ area that they undertake research in. Furthermore, senior and established social scientists were of the opinion that social science was methodologically and conceptually/ theoretically stunted and had not developed appropriate approaches to engage current societal challenges. It was also noted that much of the social sciences in South Africa was constructed in ways that perpetuate ‘whiteness’ and was embedded in Eurocentric ideas that emerged in the last 400 years.

The top three social science research fields that respondents perceived directly contributed to South African public policy are environmental issues (54%), education (52%), health issues (42%), economic issues (35%), transformation and equity issues (27%), development studies (14%), political issues (13%), rural development (13%) and globalisation and global change (12%). These areas are thus perceived to influence public policy. There were also research areas that leverage funding and have higher levels of research outputs. The results also suggest that issues deemed to be key social challenges are also perceived to influence public policy attention. Key informants, especially those based in research institutes, noted the contribution of social science in relation to policy making in the post-apartheid South Africa.

Despite the above concerns, key informants and survey respondents provided examples of their involvement in policy development. This included being involved in the development of land reform, tourism, health, gender, transformation, environmental, social welfare, arts and culture, sport, transport, energy, waste and labour policies. Their key role remains critiquing policies.

The top social science thematic areas in South Africa identified by the key informants reflected the areas that the respondents were working in and are similar to the survey findings. It included environmental (specifically climate change), poverty and inequality, urban and rural development, health related (HIV/AIDS), indigenous knowledge and transformation issues. The aspect of transformation and decolonisation were repeated issues that were discussed by many of the key informants, especially in the context of the range of protests that were being experienced across higher education institutions in South Africa led by students. It was strongly felt that the social sciences have failed to provide the critical space to engage with transformation issues sufficiently, particularly in relation to the higher education sector. One participant stated that social scientists were partly to be blamed for the challenges confronted but the current environment provided the social sciences with opportunities to provide a critical lens and theoretical approaches.

Thematic areas were identified as top social science areas based on what the NRF and funding organisations have set as priorities. There was much talk or reference to South Africa’s National Development Plan (NDP) and how that could influence research. There was a strong feeling that the thematic areas researchers were currently responding to such as rural development, environmental and health issues, and economic aspects were inter-disciplinary and have established concepts and theories. Yet, we seem to have failed to address or contribute to better understanding and dealing with key societal challenges, such as why social scientists do not have the tools to engage with the

issues of xenophobia and student disruptions. Another example is how persons in communities are using cell phones to mobilise mass-based protest, which is contemporary research which is not being done.

There was consensus that generally the top thematic areas were being driven by wider political agendas and funding frameworks. The implication is that the South African perspective was becoming entrenched and is “inward looking” as there was also an element that researchers were only looking to solve local community issues. The latter statement is supported by data which indicated that much of South African social science research was published in local journals. The challenge for the social sciences in South Africa is to balance being locally and nationally relevant while contributing to global knowledge.

The qualitative responses in relation to what were the perceived top social science disciplines varied, but there was a lot of navel gazing. For example, informants in psychology were of the opinion that they were producing a large number of the publications. This is correct if one uses the bibliometric data as a point of comparison. Interestingly, the topics that psychologists were publishing related to health issues and they were thus able to also support their research by raising funds. Some interviewees who had doctorates in psychology and one senior government official who was near completion of a PhD in psychology emphasised the fact they did not only publish in psychology journals in fact as they undertook inter-disciplinary work which fell outside of clinical psychology.

Funding agencies and government were seen to drive agendas which impacts on where persons were publishing and this led to “the top” social science disciplines. This has also influenced where researchers publish, targeting journal articles rather than books or chapters in books. Several of the key informants pointed out that funded research did not necessarily contribute to publications/knowledge production. The example provided was that the HSRC has a large government subsidy and raises a large amount of funding to produce research, yet only 5% of South African research outputs was produced by the HSRC. There was also contestation that top social science disciplines were not necessarily those who were publishing the most, but those whose who were able to contribute to both theory and intervention. A number of persons interviewed spoke to the fact that social scientists were often not specialising as they were driven by state funding and political agendas.

The most prominent response regarding the contribution of the social sciences was developing skills to think independently and critically (77%) followed by informing policies (57%), developing skills in qualitative research methodologies (55%), promoting trans-, inter- and multi-disciplinary research (55%) and developing skills in quantitative research methodologies (52%).

The dominance of the natural and physical sciences was deemed to have undermined the social sciences which one respondent indicated was “left behind”. One respondent each also stated inadequate funding, poor quality of research and methodological skills, and social sciences had failed to address and contributed to critical challenges in South Africa. Some of the respondents shared that they stated “not sure”, as the social sciences was a broad concept that covers diverse disciplines and areas of research and that respondents were familiar with their area/ discipline but not the social sciences in general to provide a response.

Key informants generally felt that social sciences was crucial to addressing the grand challenges related to transformation in higher education in South Africa as well as contributing to achieving developmental goals and addressing socio-economic and environmental challenges. Poverty and inequity, in all its forms, is entrenched in society. They (together with other socio-economic and

environmental challenges) will not be solved without social scientists and the social sciences. This was a consensus position and a dominant discourse. There was a strong feeling that all students across disciplines should be exposed to aspects of social science theory and teaching and it was crucial to developing students who were excellent in their specific professions or discipline knowledge. There was general consensus that the social sciences could provide critical thinking skills. However, key informants spoke to the fact that the social sciences was not as vibrant as it was during the late 1980s and early 1990s in South Africa. This was a view held by key informants who were both academics and political activists during the last years of apartheid, and in fact challenged both the state and the setting up of the HSRC, the latter which during apartheid supported the apartheid state.

Some of the key informants also acknowledged that to a certain extent social science had not developed theories which could engage contemporary societal challenges and this was a shortcoming in the work of South African social scientists. There was a paucity of funding for “blue sky” research in the social sciences, as most funding was earmarked for small applied studies which could be a reason for the lack of contemporary theoretical development. The social sciences was also seen as valuable as particular disciplines provided students with both quantitative and qualitative skills, which provided them with a sound background to embark on postgraduate studies in a range of disciplines, including management degrees.

A crucial value of the social sciences is that it should be a “disruptive voice for change”. There was a strong view that many of the social scientists, like those at the HSRC, were too close to government and were not providing sufficient critical work. Some informants were of the opinion that the HSRC should embark on large-scale projects and not work in silos. Also, generally informants based at universities felt that research projects should have a university partner.

It was also highlighted that there were also social scientists who were only critical, but do not provide any assistance to higher education policy change or even to curriculum transformation. There were a number of social scientists whose voices were “disruptive” as public intellectuals, “but are not providing leadership in the knowledge economy or social sciences and neither are they producing knowledge in the form of scholarly books or journal articles”. Thus, there were different ways in which social sciences could be more valuable, and this is a challenge which social scientists need to take up. The participants also made it clear that a lot of social science research takes place in universities, outside of the formal research centres. This raises questions pertaining to the prominence of research councils in terms of accessing resources, and the importance of undertaking research to assess the costs and benefits or return on investments. One informant based at a university stated that not only were academics based at universities doing more research than those in research councils and institutes with less funding and resources, but there was the additional benefit of direct student involvement and empowerment in student projects. The social sciences would also make a “more valuable contribution to South African society and the South African innovation landscape if research projects which the HSRC, for example, undertook had a university partner”. Caution was raised, however, that this should not only be in the form of sub-contracting to universities which in a sense is “using university academics as a source of relatively cheap labour”.

The main reasons why respondents undertook social science research were supporting academic career advancement (65%) and contribution to academic knowledge (60%). Other reasons were contributing to policy discourse on current issues (43%), responding to a funder’s/ client’s specialised needs/ interests (28%), being able to contribute to improving quality of life of people (11%) and being a social activist (6%). The responses related primarily to academic career aspirations

as well as being relevant and contributing to address social challenges. Those who referred to policy discourse on current issues were generally outside universities or viewed themselves primarily as social activists or being able to improve the lives of people. The link between policy informing action and transformation seems to be missing in the South African context. This could be attributed to the lack of lobbying groups or organisations that work with researchers and academics to navigate this environment and building relationships between researchers and policy makers.

In terms of respondents' contributions as an author to specific types of research outputs, the respondents mostly published in DHET accredited journals for the last five years with averages that ranged from 0.6 in 2010 and 2011 to 0.9 in 2014. The overall average for the five-year period was 3.5. The next most conspicuous output was chapters in edited books (with an overall average for the five year period being 1.7). Similar trends in outputs were found in relation to non-DHET accredited, peer reviewed journal articles (with an overall average for the five year period being 0.7), books and monographs (with an overall average for the five year period being 0.5), conference proceedings (with an overall average for the five year period being 0.5), technical/ consultancy reports (with an overall average for the five year period being 1.5) and policy reports/ development of policies (with an overall average for the five year period being 0.6). The high proportions of zero percentages indicated that numerous social science researchers were not able to have research outputs. In terms of DHET accredited journals and chapters in edited books, there was clearly an upward trend noticeable with more respondents indicating that they publish in these outputs over the five-year period.

It is clear that social scientists are responding to the DHET system where AUs for universities are recognised in DHET accredited journals, books, chapters in books and conference proceedings. Policy-orientated research is not recognised and is therefore discouraged within the context of a subsidy system. There was thus a tendency to focus on "furthering careers rather than furthering knowledge", as one key informant stated. The latter three types of outputs undergo rigorous evaluation and approval processes that are undertaken within universities (prior to submission to the DHET) and by DHET themselves. Journal articles are approved if they are published in DHET accredited lists which are communicated to all universities annually. Thus, many researchers target DHET accredited journal articles since they are known (rather than having to go through the review process) and they currently receive the highest proportion of AUs that generate subsidies.

The revised DHET (2015b) policy (to be implemented from 2016 onwards) recognises DHET accredited journals as being equivalent to chapters in books and a book being equivalent to 2 to 10 journal articles (depending on the number of pages). The review processes for books and chapters in books will still be in place. It will be interesting to see how social scientists respond to the revised DHET policy, and whether there will be an increase in these types of outputs, which globally social scientists contribute substantially to. It is important to note that many of the respondents did not publish in various research outputs, which is of concern, particularly in the academic/ university environment where research outputs are important for academic promotions and in many South African universities they are also an integral part of performance management. Some universities also provide research incentives to researchers who publish in DHET accredited research outputs so that they can generate more subsidies. Thus, research productivity can leverage individual level research funding. The implications of the subsidy model are that in South Africa there is a problematic assumption that economic incentives will result in increased research outputs and that all researchers are in a position to respond. There is limited understanding that the publication environment (especially in accredited and higher impact journals) is increasingly competitive.

Furthermore, many researchers may have the desire to publish but struggle to do so. There is therefore a need for capacity-building and skills development.

In terms of postgraduate graduation, most respondents supervised to completion Masters by research (average ranged from 0.2 in 2010 to 0.6 in 2014 and overall average for the five year period being 2). This is followed by Masters by coursework (with a yearly average of 0.3 and overall average for the five year period being 1.5). In terms of PhDs/ doctorates, the overall average for the five-year period was 1.1. It is clear that the supervision of Masters by research and PhDs/ doctorates is increasing over the years while Masters by coursework is decreasing. This again seems to be the influence of DHET policy whereby more subsidies are generated by graduating Masters by research and PhDs/ doctorates. Many universities in South Africa are phasing out Masters by coursework. In terms of non-degree professional development/ team leader role/s in research projects, the overall average for the five-year period was 1.3. Very few respondents were involved in mentoring or technical advisor roles on national or international projects. Again, as indicated in relation to the publication of research outputs, the majority of the respondents have not supervised a postgraduate student to completion and are not involved in professional development or mentoring roles linked to projects. This reflects supervision capacity challenges in South Africa. As CREST (2014) reported, the differing quality of graduate programmes in South Africa is of concern.

In terms of the three main disciplines respondents are involved in (other than their own) when they engage in multi-, trans- or inter-disciplinary research were sociology (17%), development studies (15%), political sciences (12%), geography (9%), education (9%), gender studies (8%), biological sciences (6%), tourism (6%), business management (6%), environmental studies (6%), public administration (6%) and economics (6%). The results indicated that social scientists in South Africa worked across and with many other disciplines, generally within the social and management sciences. However, there was evidence of some engagement and collaboration within the physical, natural and medical sciences. Different mixed methods approaches were discernible. There was overall agreement among the key informants interviewed that multi-, trans- or inter-disciplinary research was increasing in the social sciences. It was felt that this was most noticeable in the area of health research. It was also increasing in areas like political sciences, development studies and geography where issues such as climate change, for example, had clearly shown that one discipline's knowledge would not contribute to solving the challenges - be it at a policy, theoretical or intervention level. Benefits for social science to embrace multi-, trans- or inter-disciplinary research would be that funding (which is deemed to be lacking or scarce) will be raised jointly with colleagues from other disciplines and the consortiums of multi-disciplinary teams, have proven to be successful.

South African researchers have become more supportive of the NRF rating system. Many key informants mentioned that doing multi-, trans- or inter-disciplinary research would enhance their rating level. In their opinion the latter had spin-offs for their careers, their institutions and students who they could support. The challenges were that often universities and the government reward academics who worked on their own (even though collaboration is encouraged). While they noted the role of the NRF rating system, a number of key informants were critical of what they labelled the "commodification of higher education".

The majority of the respondents (49%) stated applied research. This was followed by advocacy research (26%), conceptual/ theoretical research (20%), and lastly, policy-orientated research (6%). In the context of this study, applied research refers to research geared towards addressing a specific societal challenge or problem (often inclusive of consultancy-based research), advocacy research is more aligned to lobbying for particular issues and working together with communities and NGOs and

policy-orientated research refers to research that either reviews existing policies or contributes to the development of specific policies. By far the most important factor identified by the majority of the respondents was academic demands (56%) followed by external research funding agencies (33%). Other factors identified were consultancy for the public sector (16%), political groups (11%), consultancy for the NGO sector (8%) and consultancy for the private sector (6%). One respondent stated pursuit of knowledge.

As for the frequency of respondent's interactions with stakeholders/ organisations in relation to the social science research conducted, most of the respondents (98%) had interactions with other researchers in their institutions on a weekly (70%) or monthly (28%) basis. The majority of respondents (56%) also interacted with other researchers in universities not their own on a less regular basis than interactions with other researchers in their own institutions. Additionally, 45% of the respondents interacted with government departments. The majority of the respondents did not interact with research councils/ units such as the NGOs (73%), HSRC (71%), national funding agencies such as the NRF (78%), private companies (71%) and international funding agencies (68%). Most researchers within universities worked with colleagues within their own or other universities. Researchers based outside universities interacted more with government departments, research councils, international funding agencies and private companies. Active researchers based at universities interacted with national funding agencies such as the NRF. Social scientists who were not research active (supervising students and/ or generating research publications) were less likely to interact with other stakeholders.

The majority of the respondents were most interested as social scientists in influencing government departments (53%), other researchers in their institution (33%), international funding agencies (24%), NGOs (23%), other researchers not in their own universities (18%) and research councils/ units such as the HSRC (14%). Only 6% of the respondents wanted to influence national funding agencies, such as the NRF and private companies. The results indicated that many researchers were not interacting with organisations they hope to influence. Informants indicated that government was in a position to use social science research to inform policies and affect change which can address challenges experienced. It was perceived that government can direct research funding and resources. More than half of the respondents positively rated (provided a rating of 1 to 3) the following aspects:

- Electronic library with access to data bases such as JSTOR, SAGE, Elsevier, etc.;
- Inter-library loan services;
- Computer facilities;
- Internet services/ facilities; and
- Quantitative research software programmes such as the Statistical Package for the Social Sciences (SPSS).

Aspects with high proportion of no responses (NA) were:

- Qualitative research software programmes such as the AtlasTI and NVivo ; and
- Reference Manager software programmes such as EndNote.

The results indicated that there were substantial differences among the organisations where respondents are from in relation to the availability of electronic research resources. The availability of software packages (notably qualitative data management packages and reference managers) and inter-library loan services were not highly rated. In terms of the software packages, the responses suggested that these resources were either not available or if they were available, researchers were

not aware of them or how to use or access them. This may also explain the high rate of not applicable responses in relation to these aspects.

The majority of the respondents felt that accessing research funding in the social sciences and their disciplinary area is easier today in South Africa compared to five years ago (33% and 38%, respectively) or it is about the same as five years ago (52% and 46%, respectively). Thus, the results indicated that respondents generally did not perceive the funding environment for the social sciences and their discipline as worsening. The key informants also agreed that the funding environment was not worsening but as a key informant pointed out, "let's not get too excited, it's a low base we working from and let's not get fooled by the crumbs when we need bread". There was a discourse which was quite self-reflective which emerged from the key informant interviews that recognised that many social scientists were not responding to the funding opportunities that existed. The good news, one participant highlighted, is that South Africa has a Higher Education Minister (who himself has a doctorate in sociology) and Science and Technology Minister who are supportive of the social sciences.

In relation to resources for social science research, most of the key informants supported the view that the situation was improving in South Africa and globally. It is important to note that key informants (even those from government) mentioned that while funding was getting better, it was not near the levels that they would like it to be. It was also highlighted that there should be more analysis of who was accessing the funding and why specific individuals and groups struggle to access funds. In fact, one key informant stated that while funding has increased, the same individuals and groups access the funding, which has contributed to reinforcing inequalities in the social sciences. There were concerns that financial allocation models within institutions were biased towards the natural and physical sciences. It was cited that often support for social science research depended on one or two individuals who were in decision-making positions and who were supportive of the social sciences.

Close to half of the respondents (48%) were not sure in relation to whether the social sciences in South Africa were in a state of 'crisis' (experiencing major challenges). Among the rest, most of the respondents either disagreed (29%) or strongly disagreed (6%), with the statement that the social sciences in South Africa were in a state of 'crisis', while 17% agreed and one respondent strongly agreed with the statement. The reasons for the not sure responses were linked to respondents not being familiar with social sciences in general, as indicated earlier, and that some aspects were strong while others were not. The few who agreed with the statement forwarded reasons in relation to funding and resource constraints, as well the continued lack of support of the social sciences, when compared to science and engineering fields. Those who disagreed forwarded reasons that social sciences contributed substantially to research outputs and addressing socio-economic and environmental challenges in South Africa. Its reputation internationally was also noted.

There was another view that social science was in a methodological crisis (that is, it did not appear to have the appropriate tools or methods to undertake rigorous research in relation to complex issues facing South Africa such as racism, student unrest, xenophobia, etc.) and responded inadequately when big societal challenges arise because they "do not have the tools to say anything". A number of participants viewed the fact that there were so few black professors in the social sciences, which was at some level indicative that there was a crisis, and there was a general failure to transform.

Close to half of the respondents (45%) felt that it was more difficult today to attract young people to a social science research career than five years ago (before 2010). The rest stated about the same

as five years ago (35%) and easier today (15%). Although respondents were not asked to provide reasons for their responses, it could be surmised that this could be attributed to the reputation of the social sciences and the perception that other disciplines and fields were better positioned to create opportunities, and that there was less of a market demand for the social sciences.

The informants stated that the career prospects were good, especially when as a social scientist one was linked to a professional degree, for example, psychology, social work or education (among the respondents who acknowledged education as a social science). Disciplines being well positioned to respond to the grand challenges were also mentioned, specifically geography and its links to climate change. However, some of the participants cautioned that many social science graduates who had professional degrees means that there was no drive to complete Masters and doctoral degrees. This has an impact on the knowledge produced in particular disciplines. There was a concern that many Masters students did not pursue PhDs and those who did were not retained in the academic sector. The quality and lack of experience of supervisors who had to supervise doctoral students was often highlighted.

There were high proportions of respondents (more than half indicating a rating of 3 to 5 which indicates some level of agreement with the statements), perceiving the following as key challenges in South Africa generally:

- Policies in South Africa were biased towards the science, engineering and technology fields;
- National funding formula was biased towards the science, engineering and technology fields;
- Lack of support for early career social science researchers;
- Poor structures, systems and governance for social science organisations;
- Limited opportunities for career development, including access to mentors and training opportunities;
- Promotion and performance management criteria were biased against the social sciences;
- Too few job opportunities (in universities, government, industry, etc.) for social scientists;
- The South African government was not supportive of social science research;
- Salaries for social scientists were below market competition; and
- Ethics processes for research involving human subjects in the social sciences.

Similar responses emerged in relation to respondents' rating of statements pertaining to specific challenges being experienced in relation to promoting and sustaining social science research in the respondents' institutions. This suggests that it is possible that respondents were projecting their institutional experiences as being reflective of the national social science landscape.

It is important to note that most academics agreed with the statement that promotion and performance management criteria were biased against the social sciences. The high proportion of "don't know" responses was mainly among those not based in universities or researcher institutions. This emerged as an important point of discussion during the key informant interviews with participants based at universities. One participant stated that despite superficial policy changes such as including the social sciences as part of 'sciences' in most national and institutional policies, there was a "bias towards the natural and physical sciences since notions of quality remain strongly linked to impact factors and publishing in specific journals such as *Nature*".

Younger social scientists and those who publish and supervise to completion fewer postgraduate students agreed with higher administrative and teaching workloads. This is a major issue of concern within universities. As one key informant who was a Head of Department stated, restructuring and

rationalisation at most universities has resulted in fewer administrative/ support staff. In these instances generally, academics were required to take on increased administrative roles. Furthermore, informants (all based at universities) cautioned that increased class sizes as well as concerns over the preparedness of students registering at universities, increased the teaching workloads of academics. One key informant shared experiences where departments were struggling to replace staff who had resigned or retired. This was also noted by one of the survey respondents who shared that in the last five years in their department, 5 (out of 14) staff had resigned or retired and only two were replaced. This severely impacted on existing staff who were required to assist. As an informant stated although this created opportunities for Masters and doctoral students to gain teaching experience, permanent academics were generally required to supervise part-time/ contract/ temporary lecturers which placed an increased burden on them. Many of the key informants stated that there was a huge demand for postgraduate skills development in South Africa (which is also identified in the NDP), yet there was limited or weak supervision capacity.

As for specific suggestions to improve and strengthen social sciences research in South Africa, substantially high proportions of respondents supported for investments in building social science research capacity (especially targeting Masters and PhDs), increased funding opportunities for social science research and promoting (and rewarding) high quality, policy relevant research. These were followed by reviewing the system for rewarding research productivity to include sustainable community practices, having promotion and performance management criteria that were specific to broader fields, such as the social sciences and natural sciences, and having more targeted programmes for social scientists, such as targeted South African Research Chairs and focused social science Centres of Excellence. Almost an equal proportion of respondents disagreed and agreed with the suggestion to restructure the NRF, with its subdivisions of a National Science and Technology Research Foundation and a National Humanities and Social Sciences Research Foundation. Other suggestions forwarded were increased opportunities to work with universities in the rest of Africa, the NRF should fund conferences for social scientists and the entry criteria for undergraduate students should be reconsidered.

Similar responses were noted in relation to specific suggestions to improve and strengthen social sciences research in respondents' respective institutions. The highest support was for increasing funding opportunities for social science research, investments in building social science research capacity (especially targeting Masters and PhDs) and supporting conference attendance and networking activities. These were followed by reviewing the system for rewarding research productivity, having more targeted programmes for social scientists, such as targeted Research Chairs and Centres, and having promotion and performance management criteria that were specific to broader fields such as the social sciences and natural sciences.

Unsurprisingly, given the challenges identified by the respondents earlier, there was substantial support for developing, rewarding and retaining social scientists (and the need for a review system where appropriate) and increasing funding opportunities. There was more support for investments in social sciences human resources capacity development compared to increasing funding. There was a need for more recognition of social sciences and equitable evaluation mechanisms for promotion and performance management purposes.

CONCLUSIONS

In terms of the overarching objectives of this study articulated in the introduction, in relation to contributing to the understanding of the social science research environment in developing countries, this South African case study showed the broader national context of higher education and how the social sciences were located within this context. The South African context is highly regulated and national funding and agendas have a substantial impact on specific institutions and research in particular. This study went beyond the focus on volumes or quantity of social sciences research and extended data collection and analysis to examine qualitative aspects, including perceptions as well as different voices, experiences and perspectives. Social sciences research is concentrated in universities and research councils/ centres/ institutes. The dominance of specific disciplines and fields was also noted, which is also linked to funding opportunities. The findings revealed that the social sciences is contributing substantially to research outputs in South Africa, which is not matched with concomitant funding, which tends to be biased towards the natural, physical and medical sciences. Furthermore, a range of opportunities and challenges exist.

In order to promote new thinking about how to measure research productivity, this study notes the limitations of focusing on traditional notions of research productivity, especially the focus almost exclusively on academically recognised or accredited research outputs (in the South African context journal articles, books and chapters in books). The attempt to examine policy and technical outputs (such as consultancy reports) and impacts in this research are illustrative example of looking more broadly at research productivity. However, the results do reveal that there are few of these outputs, with very few researchers contributing to these types of outputs. The key reason is that current funding, rating, performance and performance management mechanisms acknowledge and reward traditional types of research outputs more than other types of research outputs. The study has also focused on the 'how' aspect of measuring research productivity. In this regard, the triangulation of bibliometrics, quantitative surveys and qualitative key informant interviews underpinned a more comprehensive approach. This approach in itself is not new but the inclusion of different types of questions (including the range of social science research outputs) provides valuable insights. These insights include the challenges of collecting national data that is representative of the target population. In this study the issues of how to define social scientists (including which disciplines constitute being part of the social sciences), sampling challenges (often studies of this nature use the purposive sampling approach when surveys are conducted) and how much data to collect (the length of the survey in this study was raised as a concern) came to the fore.

For generating new data and analysis for those interested South African, African and other regional stakeholders linked to the above discussion, it was found that a mixed methods approach has generated new data as well as identified areas that need further research attention. A major gap in current understanding and analysis is how to examine the rise in trans-, multi- and inter-disciplinarity. What was evident in the findings is that current inter-disciplinary research in South Africa is actually collaboration among social sciences disciplines rather than across the natural and physical sciences. It was noted that while there is increasing rhetoric about the value of the social sciences to the natural and physical sciences, there is lack of evidence to support this assertion.

In terms of developing a framework of indicators for assessing the inter-relations between the research environment and research productivity, quality and social utility (or uptake) in South Africa, it should be aligned to the political economy approach adopted to frame the research. The challenges to translate social science outputs into impacts raise questions pertaining to the quality

and social utility of the research being conducted. This is particularly relevant in relation to the social sciences driving policy critique and development in South Africa, as well as dealing with grand challenges such as transformation and social unrest. An appropriate framework of indicators will also assist in informing the development of data collection instruments, which should be more focused. Additionally, key indicators collected systematically will permit comparisons among different case studies (whether institutions, countries, regions, etc.) as well as ascertain trends over time.

RECOMMENDATIONS

Collaboration has been recognised as an important means to achieve a higher level of productivity and visibility, and studies have affirmed these linkages. If this pattern is sustained then the research productivity of South African social scientists will increase in the coming years.

Collaboration was significant with colleagues in other institutions within the country and abroad. International collaboration has also increased in recent years. This has implications not only for the research productivity of South African social scientists, but also for the international visibility of publications. The increased visibility of publications will also bring more attention to the works of the South African scholars in the form of citations.

The study showed that certain research areas were, according to the study participants, contributing directly to policy that is important for the country. These included education, health sciences, environmental studies, developmental studies and rural development. These are the key areas that can add value to policy initiatives. In relation to funding support, it is evident that the above areas are to be prioritised. The connection between funding and research areas indicated that increased funding does not always lead to increased number of publications. The HSRC is a case in point. In the matter of specialisation, there is not a lot to report as research is often driven by government funding and political agendas. The role of the HSRC in agenda setting and collaboration with other institutions has also been highlighted, and needs to be strengthened. Furthermore, there is a need for institutions, the NRF and government departments to provide support for hubs of excellence in the social sciences. These hubs or centres will also create more spaces for networking and collaboration.

The study showed that the status of the social science research in the country is by and large not in an appreciable state and much deserves to be done for its enhancement. The value of social science research is not as valued as research in the natural and physical sciences. This is despite the role social scientists play in dealing with social issues such as poverty, inequality and other developmental issues. As regards the motivation for increased productivity, it is clear that for our respondents it is more career-driven than knowledge production oriented. Production of papers has become an integral part of the performance management system for academics in universities. They are expected to meet their norms. Journal articles, rather than books and book chapters, are the preferred types of outputs for many of them which is in line with the DHET policy on rewarding publication outputs. The recent policy changes (to be implemented in 2016) which attributes equal weighting to journal articles and chapters in books as well as books which now will be weighted 2 to 10 times that of a journal article is likely to trigger changes in where social scientists publish. However, it should be noted that books and chapters in books have to undergo stringent screening processes within institutions as well as by ASSAf, which is an organisation that remains traditionally science-based in its orientation. Therefore, the impact of the revised policy is yet to be seen and

needs to be monitored. Linked to the recognition of research outputs (which was highlighted as being biased towards the natural and physical sciences) is the need to review the current systems of rewarding research productivity as well as promotion and performance management.

The social sciences in South Africa does have its share of challenges. Most of these emanate from limited funding and policies that are skewed in favour of natural sciences. This study reveals that a major issue is not necessarily the lack of funding, but the ability of specific disciplines and researchers to access the available funding. This includes the level of awareness of available funding, which brings into question how opportunities are communicated and who the target groups are. This requires skills to be developed to access funding and resources. A great deal has to be done in terms of supportive structures, resources, and systems of governance for the development of the social sciences, and also to attract and retain social scientists. Furthermore, there is a need for funders to target new and emerging researchers, and have opportunities that provide funding that are not necessarily connected to large projects.

The focus should be on resourcing (and not only funding) the social sciences, which includes skills development, networking and mentoring as well as addressing staffing (including high workloads) and infrastructural constraints. Linked to this is the importance of training and capacity building, which includes evaluation and rethinking undergraduate and postgraduate curricula and training. The development of research capacity (including supervisory capacity) among social scientists is critical to ensure that new social scientists are well trained and prepared, and that social scientists are well positioned to contribute to addressing the diverse and complex challenges that are faced within institutions and in society more generally. The social sciences has the expertise in South Africa to play a vital role in the formulation of relevant policies, development of critical research skills and capacity, and engaging in relevant research to provide information and explanations on a range of socio-economic and environmental issues.

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